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| **Strawberry - *Fragaria*x*ananassa*** | |
| Fragaria x ananassa Duchesne ex Rozier Fig. 1  *Fragaria* x *ananassa* Duchesne ex Rozier  Strawberry Fig. 2  Guttation on a strawberry leaf Fig. 3  Guttation on a strawberry leaf  Fragaria × ananassa 'Chandler' at the San Diego County Fair, California, USA. Fig. 4  *F.* × *ananassa* 'Chandler' at the San Diego County Fair, California, USA.  Strawberry flower Fig. 5   Fragaria x ananassa flowers Fig. 6  *F.* x *ananassa* flowers  Fragaria x ananassa (Cultivated strawberry). Fruit Makawao, Maui, Hawaii Fig. 7 *F.* x *ananassa* (Cultivated strawberry). Unripe fruit Makawao, Maui, Hawaii  Fragaria x ananassa habit Fig. 8  *F.* x *ananassa* habit  Fragaria x ananassa (Cultivated strawberry). Fruit Makawao, Maui, Hawaii Fig. 9  *F.* x *ananassa* (Cultivated strawberry). Fruit Makawao, Maui, Hawaii  Fragaria x ananassa (Cultivated strawberry). Fruit Makawao, Maui, Hawaii Fig. 10 *F.* x *ananassa* (Cultivated strawberry). Fruit Makawao, Maui, Hawaii  Pineberry Fig. 11 'Pineberry' is a white strawberry cultivar with a pineapple-like flavor. It was first sold commercially in the United States in 2012.  Fragaria x ananassa (Cultivated strawberry). Crop and worker in field. Omaopio, Maui, Hawaii Fig. 14  *F.* x *ananassa* (Cultivated strawberry). Crop and worker in field. Omaopio, Maui, Hawaii  Durant la fête de la fraise de Carpentras Fig. 15  Durant la fête de la fraise de Carpentras, France  Banner of the Brotherhood of the Strawberry of Carpentras (Vaucluse, France). Fig. 28  Banner of the Brotherhood of the Strawberry of Carpentras (Vaucluse, France)  Strawberries on display at Chelsea Flower Show, 2009 Fig. 29  Strawberries on display at Chelsea Flower Show, London, England 2009  Bottles recycling bin in Ramat Hasharon Fig. 30 Bottles recycling bin in Ramat Hasharon, Israel  Strawberry pie, 8 m in diameter, Beaulieu sur Dordogne, France, during the annual strawberry festival Fig. 31  Strawberry pie, 8 m (26 ft) in diameter, Beaulieu sur Dordogne, France, during the annual strawberry festival  Strawberry Field in the hamlet Dernekamp, Kirchspiel, Dülmen, North Rhine-Westphalia, Germany Fig. 32  Strawberry Field in the hamlet Dernekamp, Kirchspiel, Dülmen, North Rhine-Westphalia, Germany  A diorama created from beeswax by Dr. Henry Brainerd Wright at the Louisiana State Exhibit Museum in Shreveport, Louisiana, depicts strawberry harvesting Fig. 33  A diorama created from beeswax by Dr. Henry Brainerd Wright at the Louisiana State Exhibit Museum in Shreveport, Louisiana, depicts strawberry harvesting | **Scientific name** *Fragaria*x*ananassa*Duchesne ex Rozier **Common names** English: garden strawberry, strawberry; French: fraisier, fraisier ananas; German: Ananaserdbeere, Erdbeere, Gartenerdbeere, Kulturerdbeere; Portuguese: morangueiro; Spanish: fresa, fresa ananás; Japanese Rōmaji: oranda-ichigo; transcribed Korean: ttalgi [**4**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Synonyms** *Fragaria* × *ananassa* Duchesne; *F*. × *ananassa* subsp. *cuneifolia* (Nutt. ex Howell) Staudt; *F. bathonica* Poit. & Turpin; *F. bonariensis* Juss. ex Pers.,p.p.38630; *F. calyculata* (Duchesne) Duchesne ex Steud.; *F. caroliniana* Poit. & Turpin; *F. chiloensis* auct.; *F. chiloensis* var. *ananassa* Duchesne ex Weston; *F. chiloensis* var. *ananassa* (Duchesne ex Rozier) Ser.; *F. chiloensis* var. *calyculata* (Duchesne) Ser.; *F. chiloensis* var. *carolinensis* Duchesne ex Weston; *F. chiloensis* var. *tincta* Duchesne ex Sm.; *F.* × *cultorum* Thorsrud & Reisaeter; *F. cuneifolia* Nutt. ex Howell; *F*. × *grandiflora* Ehrh.; *F. hybrida* Duchesne; *F. latiuscula* Greene; *F*. × *magna* auct.; *F. suchiana* Poit. & Turpin; *F. tincta* Duchesne; *F. vesca* var. *ananassa* (Duchesne ex Weston) Aiton; *Potentilla* × *ananassa* (Duchesne ex Weston) Mabb. [**3**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Relatives** Apple, *Malus domestica*; blackberry, *Rubus* spp.; capulin, *Prunus salicifolia*; chikasaw plum, *P. angustifolia*; loquat, *Eriobotrya japonica*; mayhaw, *Crataegus* spp.' peach, *P. persica* and pear, *Pyrus* spp. [**2**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Family** Rosaceae **Origin** France (accidental cross between North American and South American large strawberries) **USDA hardiness zones** 2-11 **Uses** Planted as a fruitful border; grown under fruit trees for a lush fruiting bed; grown in containers [**12**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Height** Rarely higher than 18 in. (45 cm) [**2**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Plant habit** Herbacious; creeping; stolons that form new plantlets at the tip [**5**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Longevity** Perennial (usually grown as an annual in Florida) **Trunk/bark/branches** Short woody stems **Leaves** Trifoliate; dark green; paler and haired on the undersides; on long petioles emerging from the crowns [**7**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Flowers** Yellow centers; 5 petals white or occasionally pink, borne underneath the foliage canopy [**7**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Fruit** Bright red at maturity; cone-shaped or flattened cone-shaped; numerous small, hard, brown seeds scattered on the outside surface; fleshy; prominent, green calyx at the stem end [**USDA Nutrient Content**](https://www.growables.org/information/TropicalFruit/documents/StrawberryNutrient.pdf)*pdf* **Season** February and March are peak season in Florida [**10**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Light requirement** Direct sunlight for at least 8 hours a day [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Soil tolerances** Soil should be well drained and slightly acidic [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **pH preference** 5.5–6.5 **Drought tolerance** Need weekly watering for fruit production **Flood tolerance** Strawberries do not tolerate flooding [**12**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Cold tolerance** Flowers/fruit can be damaged by air temperatures below 32 °F (0 °C) [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Plant spacing** (2-row beds) [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) 12-16 in. (30.5-40.6 cm) between plants 12-14 in. (30.5-35.6 cm) between rows 48-60 in. (121.5-152.4 cm) between beds **Roots** Shallow root system **Invasive potential**[**\***](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Invasives) None reported **Pest resistance** Thrips and mites are often present but ignored until they become troublesome [**2**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) **Known hazard** Some are severely allergic to the fruit [**2**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Reading Material** [**Growing Strawberries in the Florida Home Garden**](https://www.growables.org/information/TropicalFruit/documents/StrawberryGrowingEDIS.pdf), University of Florida *pdf* [**Strawberry Production**](https://www.growables.org/information/TropicalFruit/documents/StrawberryProductionEdis.pdf), University of Florida*pdf* [**Florida Strawberry Production Costs and Trends**](https://www.growables.org/information/TropicalFruit/documents/StrawberryProductionUF.pdf), University of Florida*pdf* [**Strawberry, *Fragaria* spp.**](https://www.growables.org/information/TropicalFruit/StrawberryFruitipedia.htm), Fruitipedia [**Strawberry**](https://www.growables.org/information/TropicalFruit/StrawberryJustFruitsExotics.htm), Just Fruits and Exotics nursery  **Origin** The cultivated strawberry, which originated in France, is the result of an accidental cross between *Fragaria virginiana*, from eastern North America, and *F. chiloensis*, from the Pacific coast of South America. The United States is the world's largest producer. In Florida, production is concentrated in Hillsborough and Manatee counties. Plant city in Hillsborough county host the Winter Strawberry Festival each year in March. For 160 years European strawberry breeding followed a different course from that in the United States. In both North America and Europe, the large-fruited strawberry was based on the same two American species combined by Europeans beginning about 1750. But from then on, the Americans have put in larger doses of the wild North American strawberry, whereas the Europeans held to a higher percentage of Chilean. [**14**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Description** The strawberry is a popular spring crop and represents a valuable addition to any Florida garden. The plant requires little maintenance apart from periodic irrigation. It consumes little space within the garden. It also has the advantage of bearing fruit within a few months after planting. The strawberry will grow in all regions of the state. However, it is regarded as an annual crop and is replanted at the start of each growing season. [**2**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  [**Biological Life Cycle of the Strawberry**](https://www.growables.org/information/TropicalFruit/StrawberryLifeCycle.htm)  **Flowers** Temperatures between 50 and 80°F (10 and 27°C) and day lengths 14 hours or less are required for the development of flowers and fruit on most strawberry varieties. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) Flowers are white, about 1″ across, with 25-30 yellow stamens and 50-500 pistils on a raised, yellow, conical receptacle. Borne on a dichasial cyme, the center-most terminal flower opens first and is largest, producing the largest fruit. [**8**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Fruit** The strawberry is an accessory fruit, since the edible portion is non-ovarian in origin (it is largely swollen receptacle tissue). The true fruits which contain the seed of the strawberry are achenes, which are similar to tiny sunflower seeds. The achenes are the numerous, tiny, ellipsoid specks that cover the fruit surface. Fruit mature rapidly; ripening occurs in 20 to 50 days after pollination. [**8**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) First berries should be ready to pick 90-110 days after planting [**10**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Varieties** Currently, three varieties are suggested for the Florida home garden: 'Camarosa', 'Sweet Charlie', and 'Festival'. All three varieties produce attractive, flavorful berries suitable for eating fresh or for freezing. 'Camarosa' has been the most productive variety in North Florida, while  'Festival' and 'Sweet Charlie' produce more fruit during the early part of the season and have been the most productive varieties in Central Florida. 'Radiance' is a newer variety that produces more fruits earlier and throughout the season in Central Florida. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)   |  |  | | --- | --- | | 'Sweet Charlie' | 'Camarosa' | | Fig. 12  'Sweet Charlie' | Fig. 13  'Camarosa' |   [**University of Florida Strawberry Cultivars**](https://www.growables.org/information/TropicalFruit/documents/StrawberryUFCultivars.pdf) *pdf (archived)* [**WinterstarTM ('FL 05-107') Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryWinterStarEdis.pdf), University of Florida *pdf* [**Florida 'Radiance' Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryRadianceEDIS.pdf), University of Florida *pdf* [**SensationTM Brand ‘Florida127’ Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberrySensationEDIS.pdf), University of Florida *pdf* [**'Sweet Charlie' Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberrySweetCharlieEdis.pdf), University of Florida *pdf (archived)* [**'Florida Beauty' Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryFloridaBeautyEDIS.pdf), University of Florida pdf[**'Florida Brilliance' Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawBrillianceUF.pdf), University of Florida *pdf* [**Florida Brilliance Shines on State’s Strawberry Industry**](https://www.growables.org/information/TropicalFruit/StrawberryVSCNews2.htm), Vegetable and Specialty Crop News [**Alpine Strawberry as a Potential Niche Crop for Florida Growers and Homeowners**](https://www.growables.org/information/TropicalFruit/documents/StrawAlpineUF.pdf), University of Florida *pdf* [**Aromatic Strawberry Variety Grows in South Florida**](https://www.growables.org/information/TropicalFruit/StrawberryVSCNews.htm), Vegetable and Specialty Crop News  **Harvesting** A strawberry fruit is ready to harvest when three quarters of its entire surface area is red. The fruit starts to deteriorate soon after it has become totally red, so it is best to harvest fruit regularly, generally, every two to four days. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Pollination** Most cultivars are self-fruitful and therefore do not need cross pollination for fruit set. However, bee activity is beneficial in transferring pollen to stigmas in an individual flower. [**8**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) A fully developed strawberry needs about 21 visits from bees. A single strawberry, can have 400-500 seeds (or small nuts) sitting on the surface of one berry. The higher the number of fully developed seeds, the bigger, tastier and even shaped a strawberry gets. [**15**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Propagation** Interestingly, strawberries do not normally reproduce by seeds. Strawberry plants send out what are called runners, which grows on the ground and sends roots into the soil. The roots then produce new plants that are often used to start new strawberry plots. [**9**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) Strawberry is commercially propagated by runners. Generally one plant produces 7-10 runners but under proper management, it can go up to 15 runners/plant. It can also be propagated through crowns (3-5 plants/crown), but division of crowns of older plants is too tedious and expensive for cultivars producing runner plants readily. [**11**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Planting** Single-crown (stem) strawberry plants are planted in Florida during the fall, from late September to early November. Flowering and fruit production generally begins in November and continues into April or May. Fruit production over this period is not constant, but occurs in two or three cycles, and can be interrupted by freezing weather. Because the highest quality fruit are produced on relatively young plants with not more than four or five branch crowns, plants are usually removed at the end of the fruiting season, and new plants are planted the following fall. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) Most strawberry plants grown commercially in Florida are planted in double rows on soil that has been mounded into raised beds. This method also is recommended for home gardens. Raised beds (as compared to flat beds) create a well-drained soil environment in which roots have sufficient oxygen for survival during periods of heavy rain. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Planting dates** North Florida Sept. 15 - Oct. 15 Central Florida Sept. 25 - Oct. 25 South Florida Oct. 1 - Dec. 1 [**6**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) [**Optimum Planting Dates for Intercropped Cucumber, Squash, and Muskmelon with Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryPlantingUF.pdf), University of Florida *pdf* **Cold protection** The most practical method for the Florida gardener to protect flowers from freeze damage may be to cover plants with sheets, blankets or frost cloth. Cover during the afternoon preceding an expected freeze. The covering should be anchored down on all sides to prevent wind from blowing it off the plants. A small “tunnel” can also be constructed using PVC hoops covered with clear plastic sheeting to create a greenhouse effect. The sides can be raised or lowered depending on air temperatures. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Fertilizing** Two pounds (~ 900 g) of 10-5-10 (or equivalent) garden fertilizer with micronutrients (including boron) per 10 feet of row should be incorporated into the bed before planting. About one-half of the nitrogen in the fertilizer should be in a slow release form, such as a sulfur- or resin-coated material. Incorporate one-fourth of the fertilizer evenly across the top of the bed with a steel rake. Apply the remainder of the fertilizer in a narrow band approximately 1 inch (2.5 cm) deep along the middle of the bed (above the drip line or soaker hose, if they have been placed in the bed). [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  [**Fertilization of Strawberries in Florida**](https://www.growables.org/information/TropicalFruit/documents/StrawberryFertilizationEDIS.pdf), University of Florida *pdf* [**Nitrogen Fertilization of Strawberry Cultivars: Is Preplant Starter Fertilizer Needed?**](https://www.growables.org/information/TropicalFruit/documents/StrawberryNitrogenFertEDIS.pdf) University of Florida *pdf* [**A Summary of N and K Research with Strawberry in Florida**](https://www.growables.org/information/TropicalFruit/documents/StrawberryNandKResearchEDIS.pdf), University of Florida *pdf*  **Irrigation** After the plants are established on the bed (i.e., when leafy bareroot transplants no longer have a tendency to wilt during the hottest part of the day), drip tape or soaker hoses can be used to keep the beds moist. Watering at a low pressure (e.g., 10 psi) for 1/2 to 1 hour should thoroughly moisten the bed. Beds can also be watered with overhead sprinklers. Early in the season when the plants are small, one watering per week may be sufficient. Later in the season, when the plants are larger and weather is warmer, two or three waterings per week will be needed. [**1**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) [**Water Movement in Strawberry Beds**](https://www.growables.org/information/TropicalFruit/documents/StrawberryWaterMovementEdis.pdf), University of Florida *pdf* [**Diseases page**](https://www.growables.org/information/TropicalFruit/StrawberryDiseases.htm)  [**Pests page**](https://www.growables.org/information/TropicalFruit/StrawberryPests.htm)  [**Beneficial Insects of Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryBeneficialInsects.pdf), University of California *pdf*  **Food Uses** The fruit is widely appreciated for its characteristic aroma, bright red color, juicy texture, and sweetness. It is consumed in large quantities, either fresh or in such prepared foods as preserves, juice, pies, ice creams, milkshakes, and chocolates. [**13**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)   |  |  |  |  | | --- | --- | --- | --- | | Soupe de Gariguettes au vinaigre balsamique blanc et ses tuiles aux amandes de Provence | Chopped strawberry macaron parisien with lemon curd filing | Strawberry fortune cookies | Strawberry-Ginger beer | | Fig. 16 | Fig. 17 | Fig. 18 | Fig. 19 |  |  |  |  | | --- | --- | --- | | Christmas market 2015 Erzsébet Square. Mid. Strawberry wines. - Budapest District V., Hungary | Cool, fresh-squeezed strawberry juice, Damascus, Syria | Strawberry pizza | | Fig. 20 | Fig. 21 | Fig. 22 |   Fig. 16. Soupe de fraises Gariguettes au vinaigre balsamique blanc et ses tuiles aux amandes de Provence Fig. 17. Chopped strawberry macaron parisien with lemon curd filing Fig. 18. Strawberry fortune cookies Fig. 19. Strawberry-Ginger beer Fig. 20. Christmas market 2015 Erzsébet Square. Mid. Strawberry wines.  Budapest District V., Hungary Fig. 21. Cool, fresh-squeezed strawberry juice, Damascus, Syria Fig. 22. Strawberry pizza  **Medicinal Uses** Alpine strawberries are believed to have medicinal uses. While the leaves, roots, and fruits were used as a skin tonic, the berries were eaten to relieve diarrhea and an upset stomach. Leaves and roots were also eaten for gout. In addition, a paste made from the strawberries was used to treat sunburn and skin blemishes, and the fruit's juices would be used to whiten teeth. [**9**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Other Uses** Artificial strawberry flavorings and aromas are also widely used in many products like lip gloss, candy, hand sanitizers, perfume, and many others [**13**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Methods of agriculture**   |  |  |  |  | | --- | --- | --- | --- | | Strawberry agriculture of Shizuoka prefecture, Japan | Fragaria x ananassa (Cultivated strawberry). Cultivated farm at Pulehu, Maui, Hawaii | Выращивание клубники ТОО "Тепличные Технологии Казахстана" , Greenhouse technology of Kazakhstan | A field using the plasticulture method | | Fig. 23 | Fig. 24 | Fig. 25 | Fig. 26 |  |  | | --- | | Strawberry hydroponic farm, Bradenton, Fl. | | Fig. 27 |   Fig. 23. Strawberry agriculture of Shizuoka prefecture, Japan Fig.  24. *F.* *x* *ananassa* (Cultivated strawberry)*.*Cultivated farm at Pulehu, Maui, Hawaii Fig.  25. Выращивание клубники ТОО "Тепличные Технологии Казахстана", Greenhouse technology of Kazakhstan Fig. 26. A field using the plasticulture method Fig. 27. Strawberry hydroponic farm, Bradenton, Fl.  **Strawberry folklore** [**9**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) In provincial France, strawberries were regarded as the highest-quality aphrodisiac. Traditionally, newlyweds were served a soup of thinned sour cream, strawberries, borage (a European herb whose flavor is reminiscent of cucumber), and powdered sugar. The second wife of Henry the VIII, Queen Anne Boelyn (1507-36), had a strawberry-shaped birthmark on her neck. Unfortunately, some claimed this fact proved she was a witch. The strawberry is recognized as representing absolute perfection in the Victorian language of flowers. Medieval stonemasons carved strawberry designs on altars and around the tops of pillars in churches and cathedrals, symbolizing perfection and righteousness. During the same time period, strawberries were served at important state occasions and festivals to ensure peace and prosperity. Sacred to the both Goddess of Love and the Virgin Mary, strawberries boast a long, dramatic history. Have you ever eaten a double strawberry? Legend holds that if you break it in half and share it with a member of the opposite sex, then you will soon fall in love with each other.  **General** The first known American species of strawberries was cultivated about 1835. The berries seem to be strewn among the leaves of the plant, and they were first called strewberries in the late 18th century. [**9**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) Later, the name was changed to strawberry—possibly from the practice of English children threading the berries on pieces of straw for sale or from the 19th century practice of laying straw around the strawberry plants to protect them from bad weather. Other stories noted that farmers would bring the strawberries to market on beds of straw to protect them during traveling. [**9**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography) Some growers paint stones red and scatter these throught the patch early in the season, theorizing that birds will soon come to regard all red objects as stones. [**2**](https://www.growables.org/information/TropicalFruit/Strawberry.htm#Bibliography)  **Further Reading** [**Crop Profile for Strawberries in Florida**](https://www.growables.org/information/TropicalFruit/documents/StrawberryCropProfileUSDA.pdf), USDA Department of Agriculture*pdf* [***Fragaria* X *ananassa,*Garden Strawberry**](https://www.growables.org/information/TropicalFruit/StrawberryEOLorg.htm), Enclyclopedia of Life[***Fragaria*: A Genus with Deep Historical Roots and Ripe for Evolutionary and Ecological Insights**](https://www.growables.org/information/TropicalFruit/documents/StrawberryAmericanJournalMedecine.pdf), American Journal of Botany *pdf* [**DNA, Technology, and Florida Strawberries**](https://www.growables.org/information/TropicalFruit/documents/StrawberryDNAEdis.pdf), University of Florida *pdf* [**Home Garden Strawberries**](https://www.growables.org/information/TropicalFruit/documents/StrawberriesHomeGardenUGAExtension.pdf), University of Georgia Extension *pdf* [**Weed Management in Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryWeedManagementEdis.pdf), University of Florida *pdf* [**Fruit and Soil Quality of Organic and Conventional Strawberry**](https://www.growables.org/information/TropicalFruit/documents/StrawberryConventionalvsOrganicPlosOne.pdf), Public Library of Science *pdf* [**Organic Farming Improves Pollination Success in Strawberries**](https://www.growables.org/information/TropicalFruit/documents/StrawberryOrganicPollinationPLOS.pdf), Public Library of Science *pdf* [**Strawberry Research, Gulf Coast Research and Education Center**](https://gcrec.ifas.ufl.edu/fruit-crops/) *ext link* [**Strawberry Botanical Art**](https://www.growables.org/information/TropicalFruit/StrawberryBotanicalArt.htm)    [**List of Growers and Vendors**](https://www.growables.org/Useful_Links/growers_vendors.html) |
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