

Assessment date 2/21/2020 Assessment completed by Petri and Lieurance

| <b><i>Camellia sinensis</i> ALL ZONES</b> |  | <b>Answer</b> | <b>Score</b> |
|---|--|---------------|--------------|
| 1.01                                      | Is the species highly domesticated?  | n             | 0            |
| 1.02                                      | Has the species become naturalised where grown?  |               |              |
| 1.03                                      | Does the species have weedy races?   |               |              |
| 2.01                                      | Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high)<br>North Zone: suited to Zones 8, 9<br>Central Zone: suited to Zones 9, 10<br>South Zone: suited to Zone 10                                     | 2             |              |
| 2.02                                      | Quality of climate match data (0-low; 1-intermediate; 2-high)  | 2             |              |
| 2.03                                      | Broad climate suitability (environmental versatility)  | y             | 1            |
| 2.04                                      | Native or naturalized in habitats with periodic inundation<br>North Zone: mean annual precipitation 50-70 inches<br>Central Zone: mean annual precipitation 40-60 inches<br>South Zone: mean annual precipitation 40-60 inches | y             | 1            |
| 2.05                                      | Does the species have a history of repeated introductions outside its natural range?   | y             |              |
| 3.01                                      | Naturalized beyond native range  | y             | 2            |
| 3.02                                      | Garden/amenity/disturbance weed  | y             | 2            |
| 3.03                                      | Weed of agriculture  | n             | 0            |
| 3.04                                      | Environmental weed   | unk           |              |
| 3.05                                      | Congeneric weed  | n             | 0            |
| 4.01                                      | Produces spines, thorns or burrs   | n             | 0            |
| 4.02                                      | Allelopathic   | unk           | 0            |
| 4.03                                      | Parasitic  | n             | 0            |
| 4.04                                      | Unpalatable to grazing animals   | y             | 1            |
| 4.05                                      | Toxic to animals   | n             | 0            |
| 4.06                                      | Host for recognised pests and pathogens  | y             | 1            |
| 4.07                                      | Causes allergies or is otherwise toxic to humans   | n             | 0            |
| 4.08                                      | Creates a fire hazard in natural ecosystems  | n             | 0            |
| 4.09                                      | Is a shade tolerant plant at some stage of its life cycle  | ?             |              |
| 4.10                                      | Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.   | unk           | 0            |
| 4.11                                      | Climbing or smothering growth habit  | n             | 0            |
| 4.12                                      | Forms dense thickets   | y             | 1            |
| 5.01                                      | Aquatic  | n             | 0            |

|   |  |                 |    |
|---|--|-----------------|----|
| 5.02  | Grass  | n               | 0  |
| 5.03  | Nitrogen fixing woody plant  | n               | 0  |
| 5.04  | Geophyte   | n               | 0  |
| 6.01  | Evidence of substantial reproductive failure in native habitat                                 | n               | 0  |
| 6.02  | Produces viable seed   | y               | 1  |
| 6.03  | Hybridizes naturally   | unk             | -1 |
| 6.04  | Self-compatible or apomictic   | n               | -1 |
| 6.05  | Requires specialist pollinators  | n               | 0  |
| 6.06  | Reproduction by vegetative propagation   | unk             | -1 |
| 6.07  | Minimum generative time (years)  | 5               | -1 |
| 7.01  | Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas) | n               | -1 |
| 7.02  | Propagules dispersed intentionally by people   | y               | 1  |
| 7.03  | Propagules likely to disperse as a produce contaminant   | n               | -1 |
| 7.04  | Propagules adapted to wind dispersal   | n               | -1 |
| 7.05  | Propagules water dispersed   | n               | -1 |
| 7.06  | Propagules bird dispersed  | n               | -1 |
| 7.07  | Propagules dispersed by other animals (externally)   | y               | 1  |
| 7.08  | Propagules dispersed by other animals (internally)   | n               | -1 |
| 8.01  | Prolific seed production   | n               | -1 |
| 8.02  | Evidence that a persistent propagule bank is formed (>1 yr)                                    | n               | -1 |
| 8.03  | Well controlled by herbicides  | unk             | 1  |
| 8.04  | Tolerates, or benefits from, mutilation or cultivation   | unk             | -1 |
| 8.05  | Effective natural enemies present in U.S.  | don't know      |    |
| <b>Total Score</b>                          |  | <b>0</b>        |    |
| <b>Implemented Pacific Second Screening</b> |  | <b>no</b>       |    |
| <b>Risk Assessment Results</b>              |  | <b>Low Risk</b> |    |

| section | # questions answered | satisfy minimum? |
|---------|----------------------|------------------|
| A       |                      | 10 yes           |
| B       |                      | 9 yes            |
| C       |                      | 19 yes           |
| total   |                      | 38 yes           |

|      | Reference   | Source data   |
|------|---|---|
| 1.01 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 2-3. eFloras; <a href="http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search">http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search</a> [Accessed 2/18/20]  | 1. Tea is the oldest non-alcoholic, caffeine containing beverage in the world and has been cultivated for the past 3,000 years 2. Of the two most common varieties, <i>Camellia sinensis</i> var. <i>sinensis</i> is a small leaf tea with more northern distributions in China, while var. <i>assamica</i> is considered large leaf tea with a southern distribution 3. Due to extensive cultivation, it is often unclear if plants are wild, cultivated, or escaped and the actual wild distributions of these two varieties is uncertain |
| 1.02 |   |   |
| 1.03 |   |   |
| 2.01 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 2. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CASI16">https://plants.sc.egov.usda.gov/core/profile?symbol=CASI16</a> [Accessed 2/18/20] 2. Missouri Botanical Gardens; <a href="http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=287342&amp;isprofile=1&amp;basic=Camellia%20sinensis">http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=287342&amp;isprofile=1&amp;basic=Camellia%20sinensis</a> [Accessed 2/18/20] 2-3. GBIF; <a href="https://www.gbif.org/species/3189635">https://www.gbif.org/species/3189635</a> [Accessed 2/18/20] 3. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] | No computer analysis was performed 1. Tea thrives well within the latitudinal ranges of 45N to 34S, which encompasses all latitudes of Florida 2. In the United States, tea bush is currently introduced in NC, SC, GA, and FL (Zones 7-9) 3. Tea is adapted to Koppen class Cfa (native range in China), Cw (China), and Af (Indonesia) which are 3 of the 4 zones in Florida  |
| 2.02 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 2. GBIF; <a href="https://www.gbif.org/species/3189635">https://www.gbif.org/species/3189635</a> [Accessed 2/18/20]  | No computer analysis was performed 1. Boundaries of the native range are not clear, but tea is probably native to China, India, and other parts of southeastern Asia 2. Introduced in the United States, Australia, Seychelles, Madagascar, Peru, Mauritius, Jamaica, Soa Tome and Principe, Kenya, United Republic of Tanzania, and Uganda   |
| 2.03 | 1. GBIF; <a href="https://www.gbif.org/species/3189635">https://www.gbif.org/species/3189635</a> [Accessed 2/18/20] 1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 1. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CASI16">https://plants.sc.egov.usda.gov/core/profile?symbol=CASI16</a> [Accessed 2/18/20]   | 1. Adapted to Koppen-Geiger climate classes Cfa (Native: China; Introduced: southeastern United States), Cwa (Native: China; Introduced: Ethiopia), Aw (Native: Vietnam, India; Introduced: northern Australia), Af (Native: Indonesia; Introduced: northwestern South America)   |
| 2.04 | 1. Squire 1979, Weather, physiology and seasonality of tea yields in Malawi; <a href="https://www.cambridge.org/core/journals/experimental-agriculture/article/weather-physiology-and-seasonality-of-tea-camellia-sinensis-yields-in-malawi/F5C7202DBC7444264D17725E4B72E981">https://www.cambridge.org/core/journals/experimental-agriculture/article/weather-physiology-and-seasonality-of-tea-camellia-sinensis-yields-in-malawi/F5C7202DBC7444264D17725E4B72E981</a> [Accessed 2/18/20] 2. Purdue University, Center for New Crops & Plants Products; <a href="https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html">https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html</a> [Accessed 2/18/20] 3. Crane & Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida home landscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20]   | 1. Tea grown in regions of Southern Malawi, Africa receive approximately 150 cm (59 in) of rainfall per year 2. Tea is reported to tolerate annual precipitation of 7-31 dm (27-122in), but around 120cm (47 in) is preferred 3. Tea plants are 'not tolerant of excessively wet or flooded soil conditions'  |

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| 2.05 | <p>1. GBIF; <a href="https://www.gbif.org/species/3189635">https://www.gbif.org/species/3189635</a> [Accessed 2/18/20] 2. Crane &amp; Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida home landscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20]</p>  | <p>1. Introduced in the United States, Australia, Seychelles, Madagascar, Peru, Mauritius, Jamaica, Soa Tome and Principe, Kenya, United Republic of Tanzania, and Uganda 2. Tea is grown in 45 countries around the world</p>   |
| 3.01 | <p>1. Cicuzza &amp; Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 2. Flora of Australia; <a href="https://profiles.ala.org.au/opus/foa/profile/Camellia%20sinensis">https://profiles.ala.org.au/opus/foa/profile/Camellia%20sinensis</a> [Accessed 2/19/20] 3. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 3. eFloras; <a href="http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search">http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search</a> [Accessed 2/18/20]</p> | <p>1. Tea bushes are naturalized ('plants act as a seed source for successful regeneration') in Tanzania; the population started as an abandoned cultivation plot (planted 50-80 years ago) that has now spread into a neighboring natural forest 2. Naturalized in places in northeastern Queensland, Australia 3. Boundaries of the native range are not clear, but tea is probably native to China, India, and other parts of southeastern Asia</p>   |
| 3.02 | <p>1. GBIF, Global Register of Introduced and Invasive Species- Tanzania; <a href="https://www.gbif.org/species/160849028/verbatim">https://www.gbif.org/species/160849028/verbatim</a> [Accessed 2/18/20] 1. Cicuzza &amp; Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 1-2. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20]</p>  | <p>1. Listed as invasive (introduced and having an impact) in the United Republic of Tanzania, as a population of abandoned tea plants have begun to spread into an undisturbed, natural forest and a logged forest 2. There are also reports of the species spreading into Madagascan forests where it may have detrimental effects on the regeneration of native forests which are important lemur habitats'</p>   |
| 3.03 |  | No evidence  |
| 3.04 | <p>1. Cicuzza &amp; Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 1-2. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 3. Juanedi 2014, Exotic plants in Halimun Salak Corridor: Mirco-environment, detection, and risk analysis of invasive plants; <a href="https://journal.biotrop.org/index.php/biotropia/article/view/308">https://journal.biotrop.org/index.php/biotropia/article/view/308</a> [Accessed 2/19/20]</p>   | <p>1. In Tanzania, tea plant has spread from an abandoned cultivation area into an undisturbed, natural forest and a logged forest, where it 'regenerates at very high densities suppressing all other species' 2. There are also reports of the species spreading into Madagascan forests where it may have detrimental effects on the regeneration of native forests which are important lemur habitats' 3. In an evaluation of non-native plants in the Halimun Salak Corridor (Java), <i>Camellia sinensis</i> was the exotic species with the lowest Weed Risk Assessment Procedure score</p> |
| 3.05 |  | No evidence  |
| 4.01 | <p>1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 1. eFloras; <a href="http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search">http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search</a> [Accessed 2/18/20]</p>   | <p>1. These features are not in the description of the species</p>   |
| 4.02 | <p>1. Dibah et al. 2012, Allelopathic potential of <i>Camellia sinensis</i> on seed germination and seedling growth of <i>Vicia</i> sp.; <a href="https://www.cabdirect.org/cabdirect/abstract/20133058853">https://www.cabdirect.org/cabdirect/abstract/20133058853</a> [Accessed 2/18/20] 2. Rezaeinodehi et al. 2006, Allelopathic potential of tea on germination and growth of <i>Amaranthus retroflexus</i> and <i>Setaria glauca</i>; <a href="https://www.zuechtungskunde.de/artikel.d11/04-Rezaeinodehi_MTAyNTI1x.PDF">https://www.zuechtungskunde.de/artikel.d11/04-Rezaeinodehi_MTAyNTI1x.PDF</a> [Accessed 2/20/20]</p>  | <p>No evidence of allelopathy under natural conditions 1. Water extracts of tea leaves at different developmental stages were found to alter the growth of root hairs and adventitious roots in <i>Vicia</i> sp. 2. In laboratory and greenhouse experiments, tea plant extracts reduced leaf area and dry weight of roots, shoots, and leaves in <i>Amaranthus retroflexus</i> and <i>Setaria glauca</i></p>  |

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| 4.03 | 1. Parasitic Plant Database; <a href="http://www.omnisterra.com/bot/pp_home.cgi">http://www.omnisterra.com/bot/pp_home.cgi</a> [Accessed 2/20/20] 2. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CASI16">https://plants.sc.egov.usda.gov/core/profile?symbol=CASI16</a> [Accessed 2/18/20]   | No direct evidence 1. Not listed as parasitic plant 2. In the family Theaceae   |
| 4.04 | 1. Purdue University, Center for New Crops & Plants Products; <a href="https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html">https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html</a> [Accessed 2/18/20] 2. National Tea Research Institute (Pakistan); <a href="http://www.pakissan.com/2002/english/spotlite/tea/index.shtml">http://www.pakissan.com/2002/english/spotlite/tea/index.shtml</a> [Accessed 2/20/20]   | 1. Tea seeds have saponin which makes them unsuitable for fodder 2. 'Being a non-palatable crop to animals, it [Tea plant] requires minimum care and protection against grazing animals'  |
| 4.05 | 1. VCA Animal Hospital, Marsden et al., Black and Green Tea: Alternative therapies; <a href="https://vcahospitals.com/know-your-pet/black-and-green-tea">https://vcahospitals.com/know-your-pet/black-and-green-tea</a> [Accessed 2/20/20] 2. ASPCA, Common Camellia; <a href="https://www.asPCA.org/pet-care/animal-poison-control/toxic-and-non-toxic-plants/common-camellia">https://www.asPCA.org/pet-care/animal-poison-control/toxic-and-non-toxic-plants/common-camellia</a> [Accessed 2/20/20] 3. National Tea Research Institute (Pakistan); <a href="http://www.pakissan.com/2002/english/spotlite/tea/index.shtml">http://www.pakissan.com/2002/english/spotlite/tea/index.shtml</a> [Accessed 2/20/20]   | 1. VCA Animal Hospital recommends administering tea or tea powder to pets for many of the same health benefits seen in humans 2. ASPCA states that congener <i>C. japonica</i> is non-toxic to dogs, cats, and horses 3. Tea plant 'is not palatable to any kind of animal'   |
| 4.06 | 1-2. Hazarika et al. 2009, Insect pests of tea and their management; <a href="https://doi.org/10.1146/annurev.ento.53.103106.093359">https://doi.org/10.1146/annurev.ento.53.103106.093359</a> [Accessed 2/20/20] 3. Hamasaki et al. 2008, Guide to insect and mite pests of tea in Hawaii; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=Hamasaki+et+al+2008+guide+to+insect+and+mite+pests+of+tea&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=Hamasaki+et+al+2008+guide+to+insect+and+mite+pests+of+tea&amp;btnG=</a> [Accessed 2/20/20]   | 1. Globally, 1031 species of arthropods are associated with intensively managed tea monocultures and they consume all parts of the plant, resulting in a 11-55% loss in yield 2. Major arthropod pests include mirids (41 species), tea tortricids (19 species), shot hole borer (9 species), and mites (7 species) 3. In Hawaii, there are major tea plant pests that cause damage by chewing- <i>Adoretus sinicus</i> (Chinese rose beetle) and <i>Amorbia emigratella</i> (Mexican leafroller)- and pests that feed on sap- 12 species including mites, scales, aphids, whiteflies, leafhoppers, and thrips  |
| 4.07 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 2. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20]   | 1. Tea is one of the oldest drinks worldwide, and is served as a morning drink for 2/3rds of the world's population daily 2. While tea is a common drink, excessive caffeine can cause headaches, anxiety, and other minor health problems  |
| 4.08 | 1. Guohua et al. 1997, A study on the establishing technique of north subtropical forest fire mantle in Jiangsu; <a href="http://en.cnki.com.cn/Article_en/CJFDTotal-JSLY703.000.htm">http://en.cnki.com.cn/Article_en/CJFDTotal-JSLY703.000.htm</a> [Accessed 2/20/20] 2. Xiong 2008, The suitable fire-resistant tree species in the hill terrain between the Yangtze and Huaihe river; <a href="http://en.cnki.com.cn/Article_en/CJFDTotal-ANHU200801033.htm">http://en.cnki.com.cn/Article_en/CJFDTotal-ANHU200801033.htm</a> [Accessed 2/20/20]   | No direct evidence, but seems unlikely to carry fire 1. Tea plant is considered a 'fire resistant species' in Jiangsu 2. Tea plant is considered to have a 'relatively strong resistance' to fire in the terrain between the Yangtze and Huaihe river   |
| 4.09 | 1. Sano et al. 2018, Effect of shading intensity on morphological and color traits and on chemical components of new tea shoots under direct covering cultivation; <a href="https://onlinelibrary.wiley.com/doi/full/10.1002/jsfa.9112">https://onlinelibrary.wiley.com/doi/full/10.1002/jsfa.9112</a> [Accessed 2/20/20] 2. Ku et al. 2010, Metabolomics analysis reveals the compositional differences of shade grown tea; <a href="https://pubs.acs.org/doi/abs/10.1021/jf902929h">https://pubs.acs.org/doi/abs/10.1021/jf902929h</a> [Accessed 2/20/20] 3. Cicuzza & Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 4. Crane & Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida home landscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20] | Plants are able to grown under deep shade but it's unclear for how long 1. Shading experiment with 90-95% light removal found that leaf area of new tea shoots did not vary significantly among open and shaded cultures during the first crop season (shade covers were removed after first season) 2. Green tea for matcha is grown under '60-90% shade for about 7-21 days before harvesting depending on the region' in order to age the tea and make it sweeter 3. In Tanzania forest, there is a high density of tea plants in the area 'indicating a high shade tolerance under dense canopy' 4. Tea plants grow in full sun or 'light shade' for best growth and fruit production |

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| 4.10 | 1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 2. Crane & Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida homeLandscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20] 3. Purdue University, Center for New Crops & Plants Products; <a href="https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html">https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html</a> [Accessed 2/18/20]  | 1. Tea requires acidic soils (low pH) 2. Tea plants are adapted to well-drained soils 3. 'Thrives on tropical red earths and deep, well-drained, acidic soils'  |
| 4.11 | 1-2. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116">https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116</a> [Accessed 2/18/20]   | 1. Growth form is a shrub or tree 2. In the family Theaceae   |
| 4.12 | 1. Cicuzza & Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 2. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] | 1. In plots in Tanzania where tea plant has been allowed to grow naturally, the plants are 'regenerating at very high densities, suppressing all other species' and forming a 'monotypic stand of tea' 2. Evergreen, perennial shrub which is usually kept below 2 m under cultivation, but can grow up to 17 m high  |
| 5.01 | 1-2. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116">https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116</a> [Accessed 2/18/20]   | 1. Growth form is a shrub or tree 2. In the family Theaceae   |
| 5.02 | 1-2. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116">https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116</a> [Accessed 2/18/20]   | 1. Growth form is a shrub or tree 2. In the family Theaceae   |
| 5.03 | 1. USDA, PLANTS Database; <a href="https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116">https://plants.sc.egov.usda.gov/core/profile?symbol=CAS116</a> [Accessed 2/18/20]   | 1. In the family Theaceae   |
| 5.04 | 1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 1. eFloras; <a href="http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search">http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search</a> [Accessed 2/18/20]  | 1. These features are not in the description of the species   |
| 6.01 | 1-2. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 1-2. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20]   | 1. Tea has been grown for medicine and beverages for over 3000 years in China and is still a major cash crop today 2. Boundaries of the native range are not clear, but tea is probably native to China, India, and other parts of southeastern Asia  |
| 6.02 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20]  | 1. Tea can be propagated through seed or cuttings, and seeds are usually collected from the orchard along with leaves   |
| 6.03 | 1-2. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20]  | No direct evidence of natural hybrids, but evidence of horticultural hybrids 1. Tea breeding consists of hybridization as well as selection, and can be either natural or hand pollinated 2. 'Tea breeds well with wild relatives' and two suspected hybrid offspring are <i>C. irrawadensis</i> and <i>C. taliensis</i> whose morphological distributions overlap with that of tea |
| 6.04 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 1. Chen et al. 2012, Late-acting self-incompatibility in tea plants; <a href="https://www.degruyter.com/view/j/biolog.2012.67.issue-2/s11756-012-0018-9/s11756-012-0018-9.xml">https://www.degruyter.com/view/j/biolog.2012.67.issue-2/s11756-012-0018-9/s11756-012-0018-9.xml</a> [Accessed 2/18/20]  | 1. Tea bushes are self-incompatible   |
| 6.05 | 1. Crane & Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida home landscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20] 2. Encyclopedia of Life; <a href="https://eol.org/pages/482447">https://eol.org/pages/482447</a> [Accessed 2/20/20]   | 1. Flowers are insect pollinated 2. Flowers are visited by carpenter bees   |

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| 6.06 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20]   | No direct evidence, propagated vegetatively by horticultural methods<br>1. Tea can be propagated through cuttings   |
| 6.07 | 1-2. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 3. Purdue University, Center for New Crops & Plants Products; <a href="https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html">https://hort.purdue.edu/newcrop/duke_energy/Camellia_sinensis.html</a> [Accessed 2/18/20]  | 1. Tea bushes can start bearing fruit 5-6 years after planting 2. Seeds take 12-18 months to develop 3. In general, tea plants require 4-12 years to bear seed  |
| 7.01 | 1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 2. Cicuzza & Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 2. eFloras; <a href="http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search">http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search</a> [Accessed 2/18/20] | No direct evidence, not grown in heavily trafficked areas and do not have seed dispersal adaptations 1. Tea bushes commonly grow in cultivated areas or forests 2. Seeds are large (about 1.5 cm diameter) and fruits are smooth  |
| 7.02 | 1. Amazon; <a href="https://www.amazon.com/Logees-Tea-Camellia-sinensis/dp/B01BGY62XM">https://www.amazon.com/Logees-Tea-Camellia-sinensis/dp/B01BGY62XM</a> [Accessed 2/18/20] 1. FastGrowingTrees.com; <a href="https://www.fast-growing-trees.com/products/camellia-sinensis-tea-plant">https://www.fast-growing-trees.com/products/camellia-sinensis-tea-plant</a> [Accessed 2/18/20] 1. Burpee; <a href="https://www.burpee.com/fruit/specialty-fruits/tea-camellia-sinensis-prod002292.html">https://www.burpee.com/fruit/specialty-fruits/tea-camellia-sinensis-prod002292.html</a> [Accessed 2/18/20]   | 1. Plants available online for sale and desired for food, medicine, and aesthetics  |
| 7.03 |   | No evidence   |
| 7.04 | 1-2. Cicuzza & Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20]   | 1. Seeds are large (about 1.5 cm diameter) 2. Very high density of tea plant seedlings suggest that the 'majority of seeds are not dispersed but germinate under the parent population'   |
| 7.05 |   | No evidence   |
| 7.06 | 1. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20] 1. eFloras; <a href="http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search">http://www.efloras.org/browse.aspx?flora_id=0&amp;name_str=Camellia+sinensis&amp;btnSearch=Search</a> [Accessed 2/18/20]   | No direct evidence 1. Fruits are not fleshy   |
| 7.07 | 1. Xiao & Huang 2019, How seed defense and seed abundance predict dispersal and survival patterns in <i>Camellia</i> ; <a href="https://onlinelibrary.wiley.com/doi/abs/10.1111/1749-4877.12408">https://onlinelibrary.wiley.com/doi/abs/10.1111/1749-4877.12408</a> [Accessed 2/20/20] 2. Cicuzza & Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20]   | 1. Several studies have found that scatter-hoarding rodents act as important seed dispersers for natural regeneration of <i>Camellia</i> species, including this field study in an experimental forest in China which demonstrated rodent caching of <i>C. sinensis</i> 2. Observed seed distribution consistent with rodents that feed on and store seeds in the ground, but further investigation is needed |
| 7.08 |   | No evidence   |

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| 8.01 | <p>1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 1. Crane &amp; Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida home landscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20] 2. Cicuzza &amp; Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20]</p>                       | <p>No direct evidence 1. Each fruit contains 1-3 seeds 2. 'The seeds are large and seed production is thus low compared to other invasives'</p>  |
| 8.02 | <p>1. Song et al. 2016, Seed dormancy in <i>Camellia sinensis</i>: Effects of cold-stratification and exogenous gibberellic acid application on germination; <a href="https://www.researchgate.net/publication/308536065_Seed_dormancy_in_Camellia_sinensis_L_Theaceae_Effects_of_cold-stratification_and_exogenous_gibberellic_acid_application_on_germination">https://www.researchgate.net/publication/308536065_Seed_dormancy_in_Camellia_sinensis_L_Theaceae_Effects_of_cold-stratification_and_exogenous_gibberellic_acid_application_on_germination</a> [Accessed 2/20/20] 2-3. Visser 1969, <i>Camellia sinensis</i>; <a href="https://edepot.wur.nl/455436#page=457">https://edepot.wur.nl/455436#page=457</a> [Accessed 2/19/20] 4. Crane &amp; Balerdi 2019, IFAS EDIS Document, Tea growing in the Florida home landscape; <a href="https://edis.ifas.ufl.edu/hs308">https://edis.ifas.ufl.edu/hs308</a> [Accessed 2/18/20]</p>   | <p>1. 'Because tea seeds are susceptible to summer temperature drying, these seeds do not establish a persistent seed bank' 2. In a test of tea seed storage, it was found that 60% of seeds could be kept viable for 10 months of storage at 0C and 100% humidity 3. Cold storage of seeds usually recommends keeping the seeds at 4.5C for 6 months, but longer viability could be possible if stored below freezing 4. Seeds lose viability shortly after collection and seeds germinate readily upon removal of the seed shell</p> |
| 8.03 | <p>1. Heap 2020, International survey of herbicide resistant weeds; <a href="http://weedscience.com/Summary/Species.aspx">http://weedscience.com/Summary/Species.aspx</a> [Accessed 2/17/20]</p>  | <p>No direct evidence 1. Not listed as resistant to herbicides</p>   |
| 8.04 | <p>1. Mondal et al. 2004, Recent advances of tea biotechnology; <a href="https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71">https://link.springer.com/article/10.1023/B:TICU.0000009254.87882.71</a> [Accessed 2/18/20] 1. Cicuzza &amp; Kokotos 2010, The invasive potential of tea: Naturalisation and spread of <i>Camellia sinensis</i> in natural and logged forests of the Amani Nature Reserve; <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C10&amp;q=the+invasive+potential+of+tea%3A+naturalisation+and+spread+of+Camellia+sinensis+in+natural+and+logged+forests+of+the+Amani+Nature+Reserve&amp;btnG=</a> [Accessed 2/19/20] 1-2. Kew Science; <a href="http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions">http://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:828548-1#descriptions</a> [Accessed 2/18/20]</p> | <p>1. Tea plants have been cultivated for thousands of years, which included coppicing 2. Plants growing undisturbed can grow into a tree up to 17 m high, but under cultivation plants are generally pruned to 2 m high</p>   |
| 8.05 | <p>1. Hazarika et al. 2009, Insect pests of tea and their management; <a href="https://doi.org/10.1146/annurev.ento.53.103106.093359">https://doi.org/10.1146/annurev.ento.53.103106.093359</a> [Accessed 2/20/20]</p>  | <p>No direct evidence 1. Globally, 1031 species of arthropods are associated with intensively managed tea monocultures and they consume all parts of the plant, resulting in a 11-55% loss in yield</p>  |