Family: *Lamiaceae*

Taxon: *Vitex agnus-castus*

Synonym:

Common Name chasteberry
chastetree
arbre chaste
Gattilier
lilac chastetree

Questionaire : current 20090513 **Assessor:** Chuck Chimera **Designation:** H(HPWRA)

Status: Assessor Approved **Data Entry Person:** Chuck Chimera **WRA Score** 9

101	**Is the species highly domesticated?**	**y=-3, n=0**	**n**
102	**Has the species become naturalized where grown?**	**y=1, n=-1**	
103	**Does the species have weedy races?**	**y=1, n=-1**	
201	**Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"**	**(0-low; 1-intermediate; 2-high) (See Appendix 2)**	**Low**
202	**Quality of climate match data**	**(0-low; 1-intermediate; 2-high) (See Appendix 2)**	**Intermediate**
203	**Broad climate suitability (environmental versatility)**	**y=1, n=0**	**y**
204	**Native or naturalized in regions with tropical or subtropical climates**	**y=1, n=0**	**n**
205	**Does the species have a history of repeated introductions outside its natural range?**	**y=-2, ?=-1, n=0**	**y**
301	**Naturalized beyond native range**	**y = 1*multiplier (see Appendix 2), n= question 205**	**y**
302	**Garden/amenity/disturbance weed**	**n=0, y = 1*multiplier (see Appendix 2)**	**y**
303	**Agricultural/forestry/horticultural weed**	**n=0, y = 2*multiplier (see Appendix 2)**	**n**
304	**Environmental weed**	**n=0, y = 2*multiplier (see Appendix 2)**	
305	**Congeneric weed**	**n=0, y = 1*multiplier (see Appendix 2)**	**y**
401	**Produces spines, thorns or burrs**	**y=1, n=0**	**n**
402	**Allelopathic**	**y=1, n=0**	**n**
403	**Parasitic**	**y=1, n=0**	**n**
404	**Unpalatable to grazing animals**	**y=1, n=-1**	**y**
405	**Toxic to animals**	**y=1, n=0**	**n**
406	**Host for recognized pests and pathogens**	**y=1, n=0**	**n**
407	**Causes allergies or is otherwise toxic to humans**	**y=1, n=0**	
408	**Creates a fire hazard in natural ecosystems**	**y=1, n=0**	**n**
409	**Is a shade tolerant plant at some stage of its life cycle**	**y=1, n=0**	**n**

410	**Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)**	**y=1, n=0**	**y**
411	**Climbing or smothering growth habit**	**y=1, n=0**	**n**
412	**Forms dense thickets**	**y=1, n=0**	**y**
501	**Aquatic**	**y=5, n=0**	**n**
502	**Grass**	**y=1, n=0**	**n**
503	**Nitrogen fixing woody plant**	**y=1, n=0**	**n**
504	**Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)**	**y=1, n=0**	**n**
601	**Evidence of substantial reproductive failure in native habitat**	**y=1, n=0**	**n**
602	**Produces viable seed**	**y=1, n=-1**	**y**
603	**Hybridizes naturally**	**y=1, n=-1**	
604	**Self-compatible or apomictic**	**y=1, n=-1**	
605	**Requires specialist pollinators**	**y=-1, n=0**	**n**
606	**Reproduction by vegetative fragmentation**	**y=1, n=-1**	**n**
607	**Minimum generative time (years)**	**1 year = 1, 2 or 3 years = 0, 4+ years = -1**	**3**
701	**Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)**	**y=1, n=-1**	
702	**Propagules dispersed intentionally by people**	**y=1, n=-1**	**y**
703	**Propagules likely to disperse as a produce contaminant**	**y=1, n=-1**	**n**
704	**Propagules adapted to wind dispersal**	**y=1, n=-1**	**n**
705	**Propagules water dispersed**	**y=1, n=-1**	**y**
706	**Propagules bird dispersed**	**y=1, n=-1**	**y**
707	**Propagules dispersed by other animals (externally)**	**y=1, n=-1**	**n**
708	**Propagules survive passage through the gut**	**y=1, n=-1**	**y**
801	**Prolific seed production (>1000/m2)**	**y=1, n=-1**	
802	**Evidence that a persistent propagule bank is formed (>1 yr)**	**y=1, n=-1**	
803	**Well controlled by herbicides**	**y=-1, n=1**	
804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	**y=1, n=-1**	**y**
805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	**y=-1, n=1**	

Designation: H(HPWRA) **WRA Score** 9

Supporting Data:

101	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	No evidence
102	2011. WRA Specialist. Personal Communication.	NA
103	2011. WRA Specialist. Personal Communication.	NA
201	2003. Piotto, B./DiNoi, A.(eds.). Seed propagation of Meditteranean trees and shrubs. APAT, Rome, Italy http://www.apat.gov.it/site/_contentfiles/00025300/25382_manuali_2003_16.pdf	"The seeds maintain their quality if they are stored at low temperatures (+3°C). They germinate easily without any pre-treatment if they are sown 'fresh' (immediately after collection, seed that has not been stored), otherwise they need cold stratification for 2 or 3 months. Sown immediately after collection, without pre-treatment, or sown in spring using cold stratified seeds."
201	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"…native to southern Europe and widely introduced elsewhere through cultivation."
202	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"…native to southern Europe and widely introduced elsewhere through cultivation."
203	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"Zones: (5), (6), 7B, 8B, 9A, 9B, 10A, 10B" [can be grown in many hardiness zones, demonstrating environmental versatility]
203	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"In the eastern United States, the species is hardy as far north as New York (USDA Hardiness Zone 6), but marginally so; it performs better further south, in USDA Hardiness Zones 8–9 (LHBH 1076; Dirr 1990; Moldenke 1968)."
203	2011. Dave's Garden. PlantFiles: Vitex, Chaste Tree, Lilac Chaste Tree, Monk's Pepper. https://davesgarden.com/guides/pf/go/84885/	"Hardiness: USDA Zone 5b: to -26.1 °C (-15 °F) USDA Zone 6a: to -23.3 °C (-10 °F) USDA Zone 6b: to -20.5 °C (-5 °F) USDA Zone 7a: to -17.7 °C (0 °F) USDA Zone 7b: to -14.9 °C (5 °F) USDA Zone 8a: to -12.2 °C (10 °F) USDA Zone 8b: to -9.4 °C (15 °F) USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)"
204	2004. Levy-Yamamori, R./Taaffe, G.. Garden plants of Japan. Timber Press, Portland, OR	"Distributed in southern Europe and naturalized in tropical areas around the world." [questionable reference]
204	2011. WRA Specialist. Personal Communication.	No other evidence of naturalization in tropical or subtropical climates. Hoiwever, higher elevations of the islands may be susceptible to naturalization. See 3.01
205	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"…native to southern Europe and widely introduced elsewhere through cultivation."
301	1976. Morton, J.F.. Pestiferous spread of many ornamental and fruit species in South Florida. Proceedings of the Florida State Horticultural Society. 89: 348-353.	"Vitex agnus-castus L. Chaste Tree. Southern Europe. Naturalized on roadsides, in hammocks and waste places"
301	1993. Stalter, R./Lamont, E.E.. The Vascular Flora of Fort Sumter and Fort Moultrie, South Carolina, One Year after Hurricane Hugo. Castanea. 58(2): 141-152.	"Vitex agnus-castus L. Persistent after cultivation near fort. Rare. M."
301	2000. Duncan, W.H./Duncan, M.B.. Trees of the Southeastern United States. University of Georgia Press, Athens, GA	"Often planted as an ornamental, persisting and escaping at scattered localities, especially around abandoned homesites. Rare."
301	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"The genus Vitex occurs in both hemispheres in the tropical and subtropical zones. About 380 taxa have been described (Bredenkamp and Botha 1993). Lilac chastetree, a deciduous, strongly aromatic shrub or small tree, is one of the few species in the genus that is native to the temperate zones, but it is not native to North America (Bailey 1949). It has, however, naturalized in much of the southeastern United States."
301	2008. Irish, M.. Trees and Shrubs for the Southwest: Woody Plants for Arid Gardens. Timber Press, Portland, OR	"naturalized in the southern United States as well as in northeast and central Texas."

301	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"Disturbed sites; planted as an ornamental tree and naturalized in scattered counties in northern Florida; also reported naturalized in Collier County."
301	2011. Calflora. The Calflora Database - Vitex agnus-castus. http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=8757	"escaped cultivar"
302	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"Vitex seeds itself into landscaped beds and can become somewhat weedy."
302	2006. TexasInvasives.org. Invasives Database - Vitex agnus-castus. http://www.texasinvasives.org/plant_database/detail.php?symbol=VIAG	"Ecological Threat: Out competing native vegetation."
302	2008. DiTomaso. J./Randall, J.. Weed Alerts! 2008. www.cal-ipc.org/ip/management/alerts/pdf/2008WeedAlerts.pdf	"Recently found along the bank of Las Virgenes Creek as a riparian escape. Escaped cultivation there along the coast. Not included in the Jepson Manual, but can be found in the back of Weeds of California Spreading evergreen broom-like species."
302	2010. FloridaGardener.com. Chasteberry Tree Vitex agnus castus. http://www.floridagardener.com/DNN/Default.aspx?tabid=59&EntryID=38	"self-sowing -- may be invasive in the garden from seeds"
302	2011. Denton County Master Gardener Association. Invasive Plants - Cross Timbers and Prairies Dirty Dozen. http://dcmga.com/north-texas-gardening/invasive-plants/	"Cross Timbers and Prairies Dirty Dozen: These plants have been identified as particularly worrisome in the Cross Timbers and Prairies ecoregion" [includes Lilac chastetree – Vitex agnus-castus]
303	2007. Randall, R.P.. Global Compendium of Weeds - Vitex agnus-castus [Online Database]. http://www.hear.org/gcw/species/vitex_agnus-castus/	No evidence
304	2006. TexasInvasives.org. Invasives Database - Vitex agnus-castus. http://www.texasinvasives.org/plant_database/detail.php?symbol=VIAG	"Ecological Threat: Out competing native vegetation." [unable to find or corroborate evidence of impacts. A weed of undetermined impacts. Answer Yes to 3.02]
304	2008. DiTomaso. J./Randall, J.. Weed Alerts! 2008. www.cal-ipc.org/ip/management/alerts/pdf/2008WeedAlerts.pdf	"Recently found along the bank of Las Virgenes Creek as a riparian escape. Escaped cultivation there along the coast. Not included in the Jepson Manual, but can be found in the back of Weeds of California Spreading evergreen broom-like species."
304	2009. Travlos, I.S.. Seed germination of several invasive species potentially useful for biomass production or revegetation purposes under semiarid conditions. Acta Biologica Cracoviensia Series Botanica. 51(1): 35–37.	"Shrub medick (Medicago arborea L., Fabaceae), Spanish broom (Spartium junceum L., Fabaceae) and chaste tree (Vitex agnus castus L., Verbenaceae) are three of the most important native shrubs in arid and semiarid Mediterranean regions; they are noxious invasive species in some areas (Hickman, 1993)."
304	2010. Craig, J.E.. The Interagency Weed Sentry Project Project Report 2008-2009 for Clark County, Nevada and the Multiple Species Habitat Conservation Plan. Public Lands Institute, UNLV, Las Vegas, NV	"Three invasive species have been recorded at Willow Beach Fish Hatchery. (See table 17). When the fish hatchery was surveyed in 2005, a single Vitex agnus-castus individual was the sole invasive species encountered." [no indication in document of impacts of V. agnus-castus]
304	2011. City of Austin Watershed Protection. Central Texas Invasive Plants - Volunteer Field Guide. http://www.ci.austin.tx.us/growgreen/downloads/invasiveplants.pdf	"Habitat: Beginning to invade nature preserves, found near water"
305	2010. Cousins, M.M./Briggs, J./Gresham, C./Whetstone, J./Whitwell, T.. Beach Vitex (Vitex rotundifolia): An Invasive Coastal Species. Invasive Plant Science and Management. 3(3): 340-345.	"Beach vitex (Vitex rotundifolia) is a salt tolerant, perennial, invasive shrub that has naturalized in coastal areas of the southeastern United States. Since its introduction in the 1980's, this Pacific Rim native has invaded many fragile beach dune ecosystems along the Mid-Atlantic, Southern Atlantic, and Gulf of Mexico. Large scale monocultures of beach vitex supplant native species through rapid vegetative reproduction and seed production. Fruits are capable of water-based dispersal, allowing for potential rapid range expansion in coastal areas. Ecosystem damage resulting from exclusion of native plant species by beach vitex and fears associated with potential negative impacts on sea turtle nesting have served to promote the control and survey efforts presently underway in coastal areas of the Carolinas, Virginia, and Maryland."
401	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"A bushy branched, strongly aromatic, deciduous shrub or small tree with densely pubescent twigs." [no spines, thorns, or burrs]

402	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"Chastetree is used effectively in a mixed shrubbery border or as a specimen." [no evidence that plant is allelopathic]
403	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"A bushy branched, strongly aromatic, deciduous shrub or small tree with densely pubescent twigs." [not parasitic]
404	2001. Jull, L.G.. Plants not favored by deer. A3727. University of Wisconsin Extension, Madison, WI http://www.bonelakewi.com/docs/LakeStewardship/PlantsNotFavByDeer.pdf	Vitex agnus-castus included in a list of plants that are resistant to or not favored by deer, presumably because it is unpalatable.
404	2011. Backyard Gardener. Vitex agnus-castus. http://www.backyardgardener.com/plantname/pda_315d.html	"Tolerances:deer, drought, heat & humidity, pollution, rabbits, seashore, slope, wind," [tolerates deer & rabbits, probably unpalatable]
405	2009. Sarkar, A.. Herbal Toxicology. Discovery Publishing House, New Delhi, India	"In animals, an adverse influences on nursing (lactation) performance has been observed. V. agnus-castus could potentially interfere with proper lactation." [probably not toxic to most animals under normal circumstances or encounters with this plant]
406	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"Pest Problems: resistant"
406	2008. Irish, M.. Trees and Shrubs for the Southwest: Woody Plants for Arid Gardens. Timber Press, Portland, OR	"The trees are susceptible to damage from nematodes, but adding organic amendments to the soil can help to reduce the nematode population."
406	2010. FloridaGardener.com. Chasteberry Tree Vitex agnus castus. http://www.floridagardener.com/DNN/Default.aspx?tabid=59&EntryID=38	"Insects do not seem to bother this plant, but it is susceptible to leaf spot and root rot (if grown in soil that is too moist)."
407	2001. Hanelt, P. (ed.). Mansfeld's encyclopedia of agricultural and horticultural crops: (except ornamentals).. Angiospermae - monocotyledones: orchidaceae - pandanaceae, Volume 5. Springer-Verlag, Berlin, Heidelberg, New York	"Widely grown as an ornamental plant and locally as a medicinal plant, for obtaining oil from the seeds and as a fibre plant (also for basketry)." [no evidence of accidental or acute toxicity to humans, despite widespread use as an ornamental and medicinal plant]
407	2011. Dave's Garden. PlantFiles: Vitex, Chaste Tree, Lilac Chaste Tree, Monk's Pepper. https://davesgarden.com/guides/pf/go/84885/	"Danger: Handling plant may cause skin irritation or allergic reaction"
408	1989. Thanos, C.A./Marcou, S./Christodoulakis, D./Yannitsaros, A.. Early post-fire regeneration in Pinus hrutia forest ecosystems of Samos island (Greece). Acta Ecologica. 10(1): 79-94.	Displays some ability to tolerate & recover from fire, but no evidence of increased fire risk in natural ecosystems.
409	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"Light Requirement: part shade to full sun"
409	2008. Irish, M.. Trees and Shrubs for the Southwest: Woody Plants for Arid Gardens. Timber Press, Portland, OR	"Exposure: Full sun in all areas."
409	2011. Monrovia. Chaste Tree - Vitex agnus-castus. http://www.monrovia.com/plant-catalog/plants/2220/chaste-tree.php	"Light needs: Full Sun"
410	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"Soil Tolerances: all textures, slightly alkaline to acidic; drought"
410	2010. FloridaGardener.com. Chasteberry Tree Vitex agnus castus. http://www.floridagardener.com/DNN/Default.aspx?tabid=59&EntryID=38	"Chasteberry will grow in full sun to parts shade, in any type of well drained soil and has a high tolerance to drought once established."
411	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"A bushy branched, strongly aromatic, deciduous shrub or small tree with densely pubescent twigs." [not climbing or smothering]
412	2010. Imeri, A./Mullaj, A./Dodona, E./Kupe, L.. Costal vegetation of the Lalzi bay (Albania). Botanica Serbica 34 (2): 99-105. 34(2): 99-105.	"Chaste tree thickets. - Vitex agnus castus formations of temporary water courses and other humid sites within, mostly situated in the thermo Mediterranean zone. They are frequent in Lalzi Bay area, particularly along the Erzeni river and other humid sites, where they can constitute dense thickets."

501	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"A bushy branched, strongly aromatic, deciduous shrub or small tree with densely pubescent twigs." [terrestrial]
502	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	Lamiaceae [previously Verbenaceae]
503	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	Lamiaceae (previously Verbenaceae) [not a Nitrogen fixing woody plant]
504	2010. Nelson, G.. The Trees of Florida. 2nd Edition. Pineapple Press Inc, Sarasota, FL	"A bushy branched, strongly aromatic, deciduous shrub or small tree with densely pubescent twigs." [not a geophyte]
601	2003. Piotto, B./DiNoi, A.(eds.). Seed propagation of Meditteranean trees and shrubs. APAT, Rome, Italy http://www.apat.gov.it/site/_contentfiles/00025300/25382_manuali_2003_16.pdf	No evidence of substantial reproductive failure in native habitat
602	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"Good seedcrops occur almost every year (Engstrom and Stoeckeler 1941). Each drupe contains a rounded 4- celled stone about 3 mm long that is brownish to purplebrown and frequently partially covered with a lighter colored membranous cap. Each stone may contain from 1 to 4 seeds"
602	2009. Travlos, I.S.. Seed germination of several invasive species potentially useful for biomass production or revegetation purposes under semiarid conditions. Acta Biologica Cracoviensia Series Botanica. 51(1): 35–37.	"Seed production is an important mode of propagation in M. arborea, S. junceum and V. agnus castus; successful seedling emergence is the first step towards their proliferation."
603	2011. WRA Specialist. Personal Communication.	Unknown
604	2004. Kadereit, J.W.. Flowering plants, dicotyledons: Lamiales (except Acanthaceae including Avicenniaceae). Springer-Verlag, New York, NY	"Self-compatibility appears to be a constant feature of breeding systems in the Verbenaceae" [family characteristic. Unknown for Vitex agnus-castus]
605	1997. Gilman, E.F.. Trees for urban and suburban landscapes. Delmar Publishers, Albany, NY	"…noteworthy for its showy, summer display (late springtime in warm climates) of fragrant, upward-pointing, terminal panicles of lavender blooms, which are quite attractive to butterflies and bees. The tree is often planted where honey is marketed to promote excellent honey production." [flowers attractive to and presumably pollinated by bees and other generalist pollinators]
605	2006. TexasInvasives.org. Invasives Database - Vitex agnus-castus. http://www.texasinvasives.org/plant_database/detail.php?symbol=VIAG	"It continues to bloom sporadically until early fall. Not only is the tree strikingly beautiful when in full bloom, but it is also fragrant and attracts pollinating bees and hummingbirds make hungry visits."
605	2011. Plants for a Future Database. Vitex agnus-castus. PFAF, http://www.pfaf.org/user/Plant.aspx?LatinName=Vitex%20agnus-castus	"The flowers are hermaphrodite (have both male and female organs) and are pollinated by Insects."
606	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"Lilac chastetree can be readily propagated by greenwood cuttings collected before flowering, by hardwood cuttings in the fall, and layering (LHBH 1976; Dirr and Heuser 1987)." [but no evidence of reproduction by vegetative fragmentations in natural settings]
607	2004. Levy-Yamamori, R./Taaffe, G.. Garden plants of Japan. Timber Press, Portland, OR	"Very fast growing in warm areas."
607	2011. Evans, E.. Plant Fact Sheets - Vitex agnus castus. North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/shrubs/vitex_agnus-castus.html	"Growth Rate: Rapid" [grown for flowers, probably flowers in under 4 years]
607	2011. Monrovia. Chaste Tree - Vitex agnus-castus. http://www.monrovia.com/plant-catalog/plants/2220/chaste-tree.php	"Growth rate: Fast"

701	1976. Morton, J.F.. Pestiferous spread of many ornamental and fruit species in South Florida. Proceedings of the Florida State Horticultural Society. 89: 348-353.	"Vitex agnus-castus L. Chaste Tree. Southern Europe. Naturalized on roadsides, in hammocks and waste places" [roadside distribution suggests potential for inadvertent dispersal of fruits or seeds]
702	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"…native to southern Europe and widely introduced elsewhere through cultivation."
703	2011. WRA Specialist. Personal Communication.	No evidence that this tree is grown with produce or other commercial crops.
704	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"The pungent fruits are small drupes about 3 to 4 mm in diameter that ripen in late summer and fall (Schopmeyer 1974)." [no adaptations for wind dispersal]
705	2003. Green, D.M./Baker, M.G.. Urbanization impacts on habitat and bird communities in a Sonoran desert ecosystem. Landscape and Urban Planning. 63: 225–239.	"Many exotic tree species colonize urban riparian habitats and single family residential areas, including China-berry (Melia azedarach), blue gum (Eucalyptus viminalis), Mexican paloverde (Parkinsonia aculeata), African sumac (Rhus lancea), chaste tree (Vitex agnus-castus), salt cedar (Tamarix chinensis) and Mexican fan palm (Washingtonia robusta)."
705	2003. Piotto, B./DiNoi, A.(eds.). Seed propagation of Meditteranean trees and shrubs. APAT, Rome, Italy http://www.apat.gov.it/site/_contentfiles/00025300/25382_manuali_2003_16.pdf	"Good seed crops occur almost every year, particularly in deep, moist soils along watercourses." [seeds presumably dispersed by water]
705	2010. Imeri, A./Mullaj, A./Dodona, E./Kupe, L.. Costal vegetation of the Lalzi bay (Albania). Botanica Serbica 34 (2): 99-105. 34(2): 99-105.	"Chaste tree thickets. - Vitex agnus castus formations of temporary water courses and other humid sites within, mostly situated in the thermo Mediterranean zone." [probably dispersed along water courses]
705	2011. City of Austin Watershed Protection. Central Texas Invasive Plants - Volunteer Field Guide. http://www.ci.austin.tx.us/growgreen/downloads/invasiveplants.pdf	""Habitat: Beginning to invade nature preserves, found near water... DO NOT PLANT near creeks and preserves;" [suggests water dispersal]
706	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"The pungent fruits are small drupes about 3 to 4 mm in diameter that ripen in late summer and fall (Schopmeyer 1974)." [drupes presumably dispersed by birds]
706	2011. Floridata. Vitex agnus-castus. http://www.floridata.com/ref/v/vitex_a.cfm	"Flowers are followed by a fleshy fruit that contains four seeds that are sometimes used as seasoning, similar to black pepper (monk's pepper is another of this species' common names)."
707	2011. WRA Specialist. Personal Communication.	No evidence, and no means of external attachment on seeds and/or fruits.
708	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"The pungent fruits are small drupes about 3 to 4 mm in diameter that ripen in late summer and fall (Schopmeyer 1974)." [drupes presumably dispersed by birds & seeds therefore presumably survive passage through the guts of birds and/or other vertebrate dispersers]
801	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"The pungent fruits are small drupes about 3 to 4 mm in diameter that ripen in late summer and fall (Schopmeyer 1974). Good seedcrops occur almost every year (Engstrom and Stoeckeler 1941). Each drupe contains a rounded 4- celled stone about 3 mm long that is brownish to purplebrown and frequently partially covered with a lighter colored membranous cap. Each stone may contain from 1 to 4 seeds (figure 1) (Schopmeyer 1974)." [seed numbers unknown]
802	2008. Bonner, F.T./Karrfalt, R.P.. The Woody Plant Seed Manual. Government Printing Office, Washington, D.C.	"In one test, seeds stored in moist sand and peat at 5 °C or 1 year showed no loss of viability (Schopmeyer 1974)." [but unknown from field conditions]
803	2011. WRA Specialist. Personal Communication.	Unknown. No information found on control using herbicides.
804	1989. Thanos, C.A./Marcou, S./Christodoulakis, D./Yannitsaros, A.. Early post-fire regeneration in Pinus hrutia forest ecosystems of Samos island (Greece). Acta Ecologica. 10(1): 79-94.	"List of species regenerating vegetatively in burnt sites of pine forest ecosystems of Samos island." [list includes Vitex agnus-castus, which apparently possesses some tolerance to fire]
804	2009. Harrison, M.. Flowering Shrubs and Small Trees for the South. Pineapple Press Inc, Sarasota, FL	"It is easily pruned into a shrub, or it can be limbed up and grown as a small tree with multiple trunks." [tolerates pruning & limbing]

804	2011. City of Austin Watershed Protection. Central Texas Invasive Plants - Volunteer Field Guide. http://www.ci.austin.tx.us/growgreen/downloads/invasiveplants.pdf	"Cut trees to stumps – remove sprouts as they appear. [Plants cut to stumps will resprout]
804	2011. Evans, E.. Plant Fact Sheets - Vitex agnus castus. North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/shrubs/vitex_agnus-castus.html	"can be severely pruned in spring"
805	2011. WRA Specialist. Personal Communication.	Unknown