UF IFAS UNIVERSITY of FLORIDA

Assessment of Non-native Plants in Florida's Natural Areas

assessment.ifas.ufl.edu

Assessment date 13 July 2015

	Lathyrus hirsutus	**Answer**	**Score**
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) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 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 North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches 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		
3.03	Weed of agriculture	y	4
3.04	Environmental weed	unk	
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	n	-1
4.05	Toxic to animals	y	1
4.06	Host for recognised pests and pathogens	unk	0
4.07	Causes allergies or is otherwise toxic to humans	y	1
4.08	Creates a fire hazard in natural ecosystems	?	
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
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	y	1
4.12	Forms dense thickets	unk	0
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	y	1
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	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	n	-1
6.07	Minimum generative time (years)	unk	-1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y	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	unk	-1
7.05	Propagules water dispersed	unk	-1
7.06	Propagules bird dispersed	unk	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	unk	-1
8.01	Prolific seed production	n	-1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	?	
8.03	Well controlled by herbicides	unk	1
8.04	Tolerates, or benefits from, mutilation or cultivation	n	-1
8.05		?	
	Total Score	**7**	
	Implemented Pacific Second Screening	**No**	
	Risk Assessment Results	**High**	

section	**# questions answered**	**satisfy minimum?**
A	9	yes
B	8	yes
C	14	yes
total	31	yes

	Reference	Source data
1.01		Not widely cultivated. No evidence of selection for reduced weediness.
1.02		Skip to question 2.01
1.03		Skip to question 2.01
2.01	1. PERAL NAPPFAST Global Plant Hardiness. http://www.nappfast.org/Plant_hardiness/2012/PHZ%20update201230%20yr%20%20300dpi.tif (Accessed: 6 July 2015) 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015) 3. Global Biodiversity Information Facility. http://www.gbif.org/species/5356382 (Accessed: 6 July 2015) 4. The IUCN Red List of Threatened Species. http://www.iucnredlist.org/details/176501/0 (Accessed: 6 July 2015)	No computer analysis was performed. 1. Florida North Zone: Hardiness zones 8 and 9. Central Zone: Hardiness zones 9 and 10. Lathyrus hirsutus is found in Global Hariness Zones 3, 4, 5, 6, 7, 8, 9, and 10 2. Native to: Algeria, Egypt, Morocco, Tunisia, Afghanistan, Iran, Iraq, Lebanon, Turkey, Armenia, Azerbaijan, Georgia, Russian Federation, Kyrgyzstan, Tajikstan, Turkmenistan, Uzbekistan, India, Pakistan, Austria, Belgium, Czechoslovakia, Germany, Hungary, Poland, Switzerland, Moldova, Ukraine, Albania, Bulgaria, Former Yugoslavia, Greece, Italy, Romania, France, Portugal, Spain. Naturalized to: Portugal. 3. See map of range. 4. Native: Afghanistan; Albania; Algeria; Armenia (Armenia); Austria; Azerbaijan (Nakhichevan, Nakhichevan); Belgium; Bulgaria; Egypt; Germany; Greece; Hungary; India (Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Dadra-Nagar-Haveli, Daman, Delhi, Diu, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu-Kashmir, Jammu-Kashmir, Karnataka, Kerala, Maharashtra, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal); Iraq; Israel; Italy; Lebanon; Morocco; Pakistan; Poland; Portugal; Romania; Spain; Switzerland; Tunisia; Turkmenistan; Ukraine; Uzbekistan and Introduced: Estonia; France; Kenya; Latvia; United States; Zimbabwe
2.02		No computer analysis was performed. Native range is well known.
2.03	1. The University of Melbourne. Köppen-Geiger Climate Map of the Wolrd. http://people.eng.unimelb.edu.au/mpeel/koppen.html (Accessed: 6 July 2015) 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015) 3. Global Biodiversity Information Facility. http://www.gbif.org/species/5356382 (Accessed: 6 July 2015) 4. The IUCN Red List of Threatened Species. http://www.iucnredlist.org/details/176501/0 (Accessed: 6 July 2015)	1. Native or Naturalized within Köppen-Geiger zones BSk, Csa, Csb, Cfa, Cfb, Dfa, Dfb, and Dfc. 2. Native to: Algeria, Egypt, Morocco, Tunisia, Afghanistan, Iran, Iraq, Lebanon, Turkey, Armenia, Azerbaijan, Georgia, Russian Federation, Kyrgyzstan, Tajikstan, Turkmenistan, Uzbekistan, India, Pakistan, Austria, Belgium, Czechoslovakia, Germany, Hungary, Poland, Switzerland, Moldova, Ukraine, Albania, Bulgaria, Former Yugoslavia, Greece, Italy, Romania, France, Portugal, Spain. Naturalized to: Portugal. 3. See map of range. 4. Native: Afghanistan; Albania; Algeria; Armenia (Armenia); Austria; Azerbaijan (Nakhichevan, Nakhichevan); Belgium; Bulgaria; Egypt; Germany; Greece; Hungary; India (Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Dadra-Nagar-Haveli, Daman, Delhi, Diu, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu-Kashmir, Jammu-Kashmir, Karnataka, Kerala, Maharashtra, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal); Iraq; Israel; Italy; Lebanon; Morocco; Pakistan; Poland; Portugal; Romania; Spain; Switzerland; Tunisia; Turkmenistan; Ukraine; Uzbekistan and Introduced: Estonia; France; Kenya; Latvia; United States; Zimbabwe

2.04	1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climate-Maps.html#rain (Accessed: 6 July 2015) 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015) 3. Global Biodiversity Information Facility. http://www.gbif.org/species/5356382 (Accessed: 6 July 2015) 4. The IUCN Red List of Threatened Species. http://www.iucnredlist.org/details/176501/0 (Accessed: 6 July 2015)	1. Native to areas with rainfall in this range. 2. Native to: Algeria, Egypt, Morocco, Tunisia, Afghanistan, Iran, Iraq, Lebanon, Turkey, Armenia, Azerbaijan, Georgia, Russian Federation, Kyrgyzstan, Tajikstan, Turkmenistan, Uzbekistan, India, Pakistan, Austria, Belgium, Czechoslovakia, Germany, Hungary, Poland, Switzerland, Moldova, Ukraine, Albania, Bulgaria, Former Yugoslavia, Greece, Italy, Romania, France, Portugal, Spain. Naturalized to: Portugal. 3. See map of range. 4. Native: Afghanistan; Albania; Algeria; Armenia (Armenia); Austria; Azerbaijan (Nakhichevan, Nakhichevan); Belgium; Bulgaria; Egypt; Germany; Greece; Hungary; India (Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Dadra-Nagar-Haveli, Daman, Delhi, Diu, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu-Kashmir, Jammu-Kashmir, Karnataka, Kerala, Maharashtra, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal); Iraq; Israel; Italy; Lebanon; Morocco; Pakistan; Poland; Portugal; Romania; Spain; Switzerland; Tunisia; Turkmenistan; Ukraine; Uzbekistan and Introduced: Estonia; France; Kenya; Latvia; United States; Zimbabwe
2.05	1. The IUCN Red List of Threatened Species. http://www.iucnredlist.org/details/176501/0 (Accessed: 6 July 2015) 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015) 3. Calflora. http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Lathyrus+hirsutus (Accessed: 6 July 2015)	1. "Introduced: Estonia; France; Kenya; Latvia; United States; Zimbabwe" 2. Naturalized to: Portugal 3. "Lathyrus hirsutus, a dicot, is an annual herb that is not native to California; it was introduced from elsewhere and naturalized in the wild."
3.01	1. The IUCN Red List of Threatened Species. http://www.iucnredlist.org/details/176501/0 (Accessed: 6 July 2015) 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015) 3. Calflora. http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Lathyrus+hirsutus (Accessed: 6 July 2015)	1. "Introduced: Estonia; France; Kenya; Latvia; United States; Zimbabwe" 2. Naturalized to: Portugal 3. "Lathyrus hirsutus, a dicot, is an annual herb that is not native to California; it was introduced from elsewhere and naturalized in the wild."
3.02	1. A Geographical Atlas of World Weeds. Krieger Publishing Company. 1991. (Accessed: 6 July 2015)	1. Classified as a common weed by Portugal and Spain and as present as a weed in Greece and Italy.
3.03	1. Encyclopedia of the Archaeology of Ancient Egypt. https://books.google.com/books?id=MH7sAgAAQBAJ&pg=PT1238&lpg=PT1238&dq=lathyrus+hirsutus+weed&source=bl&ots=nM4FXhiLWS&sig=dyapG5uUMIA2ModIGuUgFScf8QQ&hl=en&sa=X&ei=rtaaVcr0GtDfggT51YHICA&ved=0CE8Q6AEwCA#v=onepage&q=lathyrus%20hirsutus%20weed&f=false (Accessed: 6 July 2015) 2. Global Compendium of Weeds. http://www.hear.org/gcw/species/lathyrus_hirsutus/ (Accessed: 6 July 2015)	1. Listed as an agrestal weed of Ancient Egypt 2. Listed as an agricultural weed
3.04		No evidence

3.05	1. A Geographical Atlas of World Weeds. Krieger Publishing Company. 1991. (Accessed: 6 July 2015)	1. Lathyrus ochrus is listed as a principal weed of Tunisia. Lathyrus ophaca is listed as a principal weed of India. Lathyrus tuberosis is listed as a principal weed of Yugoslavia.
4.01	1. Mississippi Agricultural and Forestry Experiment Station. http://msucares.com/crops/forages/legumes/cool/caleypea.html (Accessed: 6 July 2015) 2. Kew Royal Botanical Gardens. http://www.kew.org/efloras/namedetail.do?flora=fz&taxon=2820&nameid=6908 (Accessed: 6 July 2015)	1&2. These characteristics are not listed in the description of the plant.
4.02	1. USDA Natural Resources Conservation Service. http://plants.usda.gov/java/charProfile?symbol=LAHI2 (Accessed: 7 July 2015)	"Known Allelopath: No"
4.03		No positive evidence
4.04	1. Encyclopedia of the Archaeology of Ancient Egypt. https://books.google.com/books?id=MH7sAgAAQBAJ&pg=PT1238&lpg=PT1238&dq=lathyrus+hirsutus+weed&source=bl&ots=nM4FXhiLWS&sig=dyapG5uUMIA2ModIGuUgFScf8QQ&hl=en&sa=X&ei=rtaaVcr0GtDfggT51YHICA&ved=0CE8Q6AEwCA#v=onepage&q=lathyrus%20hirsutus%20weed&f=false (Accessed: 6 July 2015) 2. Fodder and Forage Plants: Exclusive of the Grasses. https://books.google.com/books?id=M4Y-AAAAYAAJ&pg=PA24&lpg=PA24&dq=lathyrus+hirsutus+fodder&source=bl&ots=qtQFD7FzH0&sig=yS-mmdDynq3PxkwSegd9ZEBFCtk&hl=en&sa=X&ei=qu6bVew_ibKCBMHUtNgP&ved=0CFgQ6AEwDQ#v=onepage&q=lathyrus%20hirsutus%20fodder&f=false (Accessed: 7 July 2015)	1."Uses: Fodder" 2. "The plants bear grazing well, and stock of all kinds eat the dry hay. For the Gulf States this is one of the most valuable species of vetch for winter and early spring fodder."
4.05	1. AgriLife Extension, Texas A&M System. http://essmextension.tamu.edu/plants/plant/singletary-pea/ (Accessed: 7 July 2015) 2. US National Library of Medicine National Institutes of Health. http://www.ncbi.nlm.nih.gov/pubmed/25594329 (Accessed: 7 July 2015)	1. "Toxic Agent- The vegetation of singletary pea is not toxic and is highly nutritious, but the seeds contain toxic amino acids. Lathyrism, the neurological syndrome most often produced by chronic consumption of the seeds, can affect all species including humans, but horses are the most sensitive. Horses are usually affected by hay containing intact pods with seeds. Bovine cases usually result from grazing pastures with many mature plants.Signs of Livestock Ingestion- Horses with lathyrism demonstrate these signs: Incoordination of rear legs; Unusual stance with rear legs too far forward; Exaggerated stepping of rear legs; Paralysis of rear legs. Cattle with lathyrism show: Reluctance to stand; Incoordination of rear legs; Inability to rise. Chronic consumption of seeds of other Lathyrus species result in skeletal deformities in growing animals. Calves born to cows that have consumed seeds of singletary pea for several months during gestation may have crooked legs and a curved spine." 2. "Caley Pea intoxication may occur within days of seed pod consumption. The neurologic signs are unique and suggest involvement of the upper motor neuron system and regions of the spinal cord influencing voluntary motor movement. Drought conditions during plant growth may increase the risk of toxicosis."

4.06	1. Plant Disease Reporter. http://www.cabdirect.org/abstracts/19630801931.html?freeview=true (Accessed: 7 July 2015) 2. USDA Fungal Database. http://nt.ars-grin.gov/fungaldatabases/new_allView.cfm?whichone=FungusHost&thisName=Lathyrus%20hirsutus&organismtype=Host&fromallCount=yes (Accessed: 7 July 2015)	1. Lathyrus hirsutus is the host of reniform nematode. 2. The following pests and fungi are listed: "Ascochyta sp. (Leaf spot.): Louisiana - 94, Erysiphe communis Romania - 7190, Erysiphe trifolii Bulgaria - 37557, Microsphaera trifolii var. Trifolii Bulgaria - 13300,Romania - 13300, Mycosphaerella sp. (Stem spot.) Alabama - 94, Oidium sp. England - 7190,Portugal - 7190, Peronospora lathyri-aphacae Romania - 7505, Peronospora lathyri-hirsuti Romania - 6731, 7505, Pythium sp. (Root rot.) California - 94,Connecticut - 94,Maryland - 94,New Jersey - 94, Ramularia deusta var. alba Europe - 44008,Hungary - 44008,Italy - 44008, Uromyces fabae Italy - 10447" --- There is no evidece that the taxon is a significant primary or alternate host.
4.07	1. AgriLife Extension, Texas A&M System. http://essmextension.tamu.edu/plants/plant/singletary-pea/ (Accessed: 7 July 2015)	1. "The vegetation of singletary pea is not toxic and is highly nutritious, but the seeds contain toxic amino acids. Lathyrism, the neurological syndrome most often produced by chronic consumption of the seeds, can affect all species including humans, but horses are the most sensitive."
4.08	1. USDA Natural Resources Conservation Service. http://plants.usda.gov/java/charProfile?symbol=LAHI2 (Accessed: 7 July 2015)	1. "Fire Resistant: No" No evidence that Lathyrus hirsutus creates a fire hazard.
4.09	1. USDA Natural Resources Conservation Service. http://plants.usda.gov/java/charProfile?symbol=LAHI2 (Accessed: 7 July 2015)	1. "Shade Tolerance: Intolerant"
4.10	1. USDA Natural Resources Conservation Service. http://plants.usda.gov/java/charProfile?symbol=LAHI2 (Accessed: 8 July 2015) 2. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 8 July 2015)	1. "Adapted to Coarse Textured Soils: Yes, Adapted to Fine Textured Soils: Yes, Adapted to Medium Textured Soils: Yes, Anaerobic Tolerance: None, CaCO3 Tolerance: Low, Fertility Requirement: Medium, Moisture Use: High, pH Minimum: 5.8, pH Maximum: 6.2, Root Depth Minimum (inches): 12" 2. "was introduced into the United States from the Mediterranean area of Europe for forage and improvement of agricultural soil" --- This implies that the plant grows well in soils that are lacking the nutrients required for other plants. However, there is not enough information to provide a definitive answer to this quesiton.
4.11	1. University of Michigan. Climbers. http://climbers.lsa.umich.edu/?p=3069 (Accessed: 7 July 2015) 2. Kew Royal Botanic Gardens. Flora Zambesiaca. http://apps.kew.org/efloras/namedetail.do?flora=fz&taxon=2820&nameid=6908 (Accessed: 7 July 2015)	1. "Climbing Mechanism: L. hirsutus climbs using the tendrils at the leaf apex. The tendrils are sensitive to contact, allowing the pea to climb neighboring plants or fences (8)." 2. Description: Climbing annual herb"
4.12	1. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 7 July 2015) 2. University of Michigan. Climbers. http://climbers.lsa.umich.edu/?p=3069 (Accessed: 7 July 2015)	1. "Habitats include thickets." "It is somewhat vine-like and semi-erect, relying on tendrils to cling to adjacent vegetation for support." 2. "Climbing Mechanism: L. hirsutus climbs using the tendrils at the leaf apex. The tendrils are sensitive to contact, allowing the pea to climb neighboring plants or fences (8)." Grows to become a part of thickets, but does not grow a thicket on its own.
5.01		No positive evidence of floating, emergent, or submergent tendencies.
5.02	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015)	1. "Family: Fabacae"

5.03	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?21571 (Accessed: 6 July 2015)	1. "Family: Fabacae"
5.04		No evidence of specialized organs
6.01		No evidence found of substantial reproductive failure
6.02	1. Kew Royal Botanic Gardens. Seed Information Database. http://data.kew.org/sid/SidServlet?Source=epic&ID=13444&Num=eaD (Accessed: 7 July 2015)	1. Produces viable seed
6.03		No evidence
6.04	1. United States Department of Agriculture and Natural Resources Conservation Service. http://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/gapmcrb8426.pdf (Accessed: 7 July 2015) 2. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 8 July 2015)	1. "Caley peas are self pollinated plants" 2. "This plant spreads by reseeding itself"
6.05	1. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 7 July 2015)	1. "The flowers are pollinated by bumblebees and other long-tonged bees. Butterflies and skippers may suck nectar from the flowers, but they are less effective at pollination."
6.06	1. Illinois Plant Information Network. http://www.fs.fed.us/ne/delaware/ilpin/1649.co (Accessed: 7 July 2015)	1. "REPRODUCTION: Sexual" Additionally, the plant is an annual, which do not typically reproduce by vegetative propagation.
6.07	1. USDA Natural Resources Conservation Service. http://plants.usda.gov/java/charProfile?symbol=LAHI2 (Accessed: 7 July 2015)	1. "Growth Rate: Rapid" --- Insufficient information
7.01	1. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 7 July 2015)	1. "Habitats include… areas along roadsides and railroads, edges of fields, and waste areas."
7.02	1. United States Department of Agriculture and Natural Resources Conservation Service. http://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/gapmcrb8426.pdf (Accessed: 7 July 2015)	1. Suggested to farmers as a mechanism of increasing forage yields in Johnsongrass and dallisgrass. "Breeder seed of AU GroundCover caley pea is being maintained at the Jully Carter Plant Materials Center in Americus, Georgia. Southern Proprietary Seeds Inc. Lake Oswego, Oregon is producing other classes of AU GroundCover for public utilization."
7.03		No postive evidence
7.04		No evidence
7.05		No evidence
7.06	1. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 7 July 2015)	1. "The seeds are occasionally eaten by the Bobwhite and other upland gamebirds." No information on whether seeds remain viable after passing through the digestive track.
7.07		No evidence, but no clear mechanism of attachment is present

7.08	1. Illinois Wild Flowers. http://www.illinoiswildflowers.info/weeds/plants/singleton_pea.htm (Accessed: 7 July 2015) 2. Fodder and Forage Plants: Exclusive of the Grasses. https://books.google.com/books?id=M4Y-AAAAYAAJ&pg=PA24&lpg=PA24&dq=lathyrus+hirsutus+fodder&source=bl&ots=qtQFD7FzH0&sig=yS-mmdDynq3PxkwSegd9ZEBFCtk&hl=en&sa=X&ei=qu6bVew_ibKCBMHUtNgP&ved=0CFgQ6AEwDQ#v=onepage&q=lathyrus%20hirsutus%20fodder&f=false (Accessed: 7 July 2015) 3. AgriLife Extension, Texas A&M System. http://essmextension.tamu.edu/plants/plant/singletary-pea/ (Accessed: 7 July 2015)	1. "White-Tailed Deer, livestock, and probably smaller herbivores readily eat the foliage." 2. "The plants bear grazing well, and stock of all kinds eat the dry hay. For the Gulf States this is one of the most valuable species of vetch for winter and early spring fodder." 3. "Toxic Agent- The vegetation of singletary pea is not toxic and is highly nutritious, but the seeds contain toxic amino acids."; Seeds are consumed by animals, but they cause toxicity. No information available on the viability of seeds after passing through the digestive track.
8.01	1. USDA Natural Resources Conservation Service. http://plants.usda.gov/java/charProfile?symbol=LAHI2 (Accessed: 7 July 2015)	1. "Fruit/Seed Abundance: Low"
8.02	1. Kew Royal Botanic Gardens. Seed Information Database. http://data.kew.org/sid/SidServlet?Source=epic&ID=13444&Num=eaD (Accessed: 7 July 2015)	1. Orthodox seed storage. Meaning "seeds can be dried, without damage, to low moisture contents, usually much lower than those they would normally achieve in nature. Over a wide range of storage environments their longevity increases with reductions in both moisture content and temperature, in a quantifiable and predictable way." "Storage Conditions: Long-term storage under IPGRI preferred conditions at RBG Kew, WP. Oldest collection 15 years; germination change 93 to 100%, 14 years, 1 collection"
8.03		No evidence
8.04	1. United States Department of Agriculture and Natural Resources Conservation Service. http://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/gapmcrb8426.pdf (Accessed: 8 July 2015) 2. Mississippi State University. http://msucares.com/crops/forages/legumes/cool/caleypea.html (Accessed: 8 July 2015)	1. "Resprout Ability: No… Fire Tolerance: None" 2. "plants are easily damaged by tampling"
8.05	1. Plant Disease Reporter. http://www.cabdirect.org/abstracts/19630801931.html?freeview=true (Accessed: 7 July 2015) 2. USDA Fungal Database. http://nt.ars-grin.gov/fungaldatabases/new_allView.cfm?whichone=FungusHost&thisName=Lathyrus%20hirsutus&organismtype=Host&fromallCount=yes (Accessed: 7 July 2015)	1. Lathyrus hirsutus is the host of reniform nematode. 2. The following pests and fungi are listed: "Ascochyta sp. (Leaf spot.): Louisiana - 94, Erysiphe communis Romania - 7190, Erysiphe trifolii Bulgaria - 37557, Microsphaera trifolii var. Trifolii Bulgaria - 13300,Romania - 13300, Mycosphaerella sp. (Stem spot.) Alabama - 94, Oidium sp. England - 7190,Portugal - 7190, Peronospora lathyri-aphacae Romania - 7505, Peronospora lathyri-hirsuti Romania - 6731, 7505, Pythium sp. (Root rot.) California - 94,Connecticut - 94,Maryland - 94,New Jersey - 94, Ramularia deusta var. alba Europe - 44008,Hungary - 44008,Italy - 44008, Uromyces fabae Italy - 10447" --- None of the predators and pests found in the U.S. are known to substantially reduce growth and reproduction.