

Assessment date 27 April 2017

<i>Cyamopsis tetragonoloba</i> North		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	1	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	1	
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	n	-2
3.02	Garden/amenity/disturbance weed	unk	
3.03	Weed of agriculture	unk	
3.04	Environmental weed	unk	
3.05	Congeneric weed	unk	
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	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	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	unk	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	unk	0
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	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	unk	-1
6.07	Minimum generative time (years)	1	1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-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)	unk	-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	unk	-1
8.05		?	
Total Score			-5
Implemented Pacific Second Screening			no
Risk Assessment Results			Low

section	# questions answered	satisfy minimum?
A		7 yes
B		9 yes
C		12 yes
total		28 yes

Assessment date 27 April 2017

<i>Cyamopsis tetragonoloba</i> Central		Answer	Score
1.01	Is the species highly domesticated?	unk	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)	1	
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	n	-2
3.02	Garden/amenity/disturbance weed	unk	
3.03	Weed of agriculture	unk	
3.04	Environmental weed	unk	
3.05	Congeneric weed	unk	
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	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	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	unk	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	unk	0
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	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	unk	-1
6.07	Minimum generative time (years)	1	1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-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)	unk	-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	unk	-1
8.05		?	
Total Score			-5
Implemented Pacific Second Screening			no
Risk Assessment Results			Low

section	# questions answered	satisfy minimum?
A		7 yes
B		9 yes
C		12 yes
total		28 yes

Assessment date 27 April 2017

<i>Cyamopsis tetragonoloba</i> South		Answer	Score
1.01	Is the species highly domesticated?	unk	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)	1	
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	n	-2
3.02	Garden/amenity/disturbance weed	unk	
3.03	Weed of agriculture	unk	
3.04	Environmental weed	unk	
3.05	Congeneric weed	unk	
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	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	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	unk	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	n	0
4.12	Forms dense thickets	unk	0
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	y	1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	unk	-1
6.07	Minimum generative time (years)	1	1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-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)	unk	-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	unk	-1
8.05		?	
Total Score			-6
Implemented Pacific Second Screening			no
Risk Assessment Results			Low

section	# questions answered	satisfy minimum?
A		6 yes
B		9 yes
C		12 yes
total		27 yes

	Reference	Source data
1.01	1. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 2. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	Insufficient evidence 1. "There have been notable improvements in guar varieties developed in the last 30 years. The newer cultivars are much more disease resistant with higher yields. Pod set in improved varieties is higher, and pods are well distributed on the main stem and branches, increasing harvest efficiency. The multiple branching of these newer cultivars also produces more pods." 2. "Selection and breeding in guar in the United States aims at increased seed production and disease resistance, while in India cultivars have been selected for seed, vegetable, and multipurpose use. The American cultivars are derived from a very small number of introductions from India, leaving the genetic variability largely unutilized."
1.02		Skip to 2.01
1.03		Skip to 2.01
2.01	1. Global Plant Hardiness Zones for Phytosanitary Risk Analysis. http://naldc.nal.usda.gov/download/36586/PDF (Accessed: 21 April 2017) 2. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 3. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	1. Figure 3. Florida North Zone: Hardiness zones 8 and 9. Central Zone: Hardiness zones 9 and 10. South Zone: Hardiness zone 10. 2. Native to India 3. "It has been speculated that guar originated in north-western India and Pakistan"
2.02		Some uncertainty as to native range
2.03	1. The University of Melbourne. Köppen-Geiger Climate Map of the World. http://people.eng.unimelb.edu.au/mpeel/koppen.html (Accessed: 21 April 2017) 2. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 3. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	1. Native to Köppen-Geiger Zones Af, Am, Aw, BWh, BSh, Cwa, and Cwb 2. Native to India 3. "It has been speculated that guar originated in north-western India and Pakistan"
2.04	1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climate-Maps.html#rain (Accessed: 21 April 2017) 2. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 3. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	1. Native to areas with rainfall in this range 2. Native to India 3. "It has been speculated that guar originated in north-western India and Pakistan"
2.05	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	1. "Guar was introduced into the United States from India in 1903. Production in the United States is centered in Texas, Oklahoma, and Arizona, but it is also adapted to locations with more tropical climates, such as in Florida and Puerto Rico." 2. "introduced into the United States from India in 1903. Commercial production of guar in the United States began in the early 1950s and has been concentrated in northern Texas and southwestern Oklahoma. The major world suppliers are India, Pakistan and the United States, with smaller acreages in Australia and Africa. In the early 1980s, Texas growers were planting about 100,000 acres annually." 3. "Guar was taken to Indonesia, Malaysia, and the Philippines around 1915. It is now grown in many parts of the drier tropics and subtropics. Introduced into the United States in 1903, it was developed into an industrial gum-producing crop during the second World War."

3.01	1. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)	1. "Guar is not known in the wild state. It has a long history of cultivation in Asia and was introduced to the USA, Southern and Central America, Australia, South Africa, Zimbabwe, Malawi, Nigeria and Israel."
3.02		No evidence
3.03		No evidence
3.04		No evidence
3.05	1. Global Compendium of Weeds. http://www.hear.org/gcw/species/cyamopsis_senegalensis/ (Accessed: 25 April 2017)	Insufficient evidence 1. <i>Cyamopsis senegalensis</i> is classified as an agricultural weed and a weed, however no additional evidence could be found
4.01	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017)	No evidence
4.02	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017)	No evidence 1. "Guar is a native plant of India where it is grown principally for its green fodder and for the pods that are used for food and feed. It has soil-enriching properties since it is a legume."
4.03		No evidence
4.04	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017)	1. "Guar is a native plant of India, where it is grown principally for its green fodder and for the pods that are used for food and feed." 2. "grown for cattle feed" 3. "seeds are used as livestock feed"
4.05	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017)	1. "Guar is a native plant of India, where it is grown principally for its green fodder and for the pods that are used for food and feed." 2. "grown for cattle feed" 3. "seeds are used as livestock feed"

4.06	<p>1. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 2. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017) 3. Engler & Prantl, Natürl. Pflanzenfam. 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)</p>	<p>1. "New guar varieties have been released that have some resistance to diseases that once devastated fields of the crop. To prevent disease problems, select certified seed that does not contain seed of older varieties with less disease resistance."; "There are two major diseases of guar worldwide: 1. Alternaria leaf or target spot (<i>Alternaria cucumerina</i> var. <i>cyamopsidis</i>): This fungal disease may become severe during periods of heavy dew and high humidity. It causes a brown target-like lesion on the leaf between bloom and pod set. As the disease progresses, lesions enlarge, join and cause leaf drop. 2. Bacterial blight (<i>Xanthomonas cyamopsidis</i>): This seed-borne disease can cause loss of plants from the seedling stage until maturity. Symptoms include large angular necrotic lesions at the tips of leaves, which cause defoliation and black streaking of the stems. This is potentially the greatest disease hazard to guar."; "The guar midge (<i>Contarinia texana</i>) is the primary guar insect pest in the Southwest. Heavy midge infestations have caused up to 30% loss in seed production. Guar midge infestations are generally heavier in fields with sandy or sandy loam soils. Damage to guar is caused by the larvae, which develop in the guar buds. Infested buds eventually dry up and fall from the plant. The adult female midge deposits her eggs in developing buds. After larvae complete their development, they drop from the buds to the ground to pupate. There are several generations each year. Rainfall or sprinkler irrigation can reduce midge populations drastically. However, field inspection should continue because midge infestation problems may increase again as a result of improved growing conditions. Control midges while guar is producing buds -- primarily between 45 and 90 days after emergence. Other guar insect pests include the gall midge (<i>Asphondylia</i> sp.), three-cornered alfalfa hoppers, pea aphids, white grubs, thrips, and whiteflies. Storage pests have not been a</p>
4.07	<p>1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017) 4. Engler & Prantl, Natürl. Pflanzenfam. 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)</p>	<p>1. "For use as a vegetable, pods must be picked when young, before they become hairy and woody. They are eaten most often as a French bean or as a curry vegetable." 2. "In Asia, guar beans are used as a vegetable for human consumption" 3. "The young tender pods can be eaten as vegetables" 4. "Traditionally, leaves are eaten to cure night blindness, while pods are used as a laxative."</p>
4.08		No evidence
4.09	<p>1. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)</p>	<p>1. "Guar is essentially a sun-loving plant."; "It is tolerant to shading"</p>
4.10	<p>1. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 2. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)</p>	<p>1. "Guar grows well under a wide range of soil conditions. It performs best on fertile, medium-textured and sandy loam soils with good structure and well-drained subsoils. Guar is susceptible to waterlogging. Guar is considered to be tolerant of both soil salinity and alkalinity." 2. "Guar grows on a wide range of soils which are well drained and non-acidic. The suitable soil pH ranges from 7.5 to 8.0. The best soils for commercial production include sandy, sandy loam and course-textured alluvial soils. Guar does not grow well on heavy black soils."; "It tolerates soils of very low fertility, high salinity and alkalinity and is used in the reclamation of these soils."</p>

4.11	1. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)	1. "Guar is a robust, erect, herbaceous, annual legume"
4.12		No evidence
5.01	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)	1. legume 2. "Guar is a robust, erect, herbaceous, annual legume"
5.02	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)	1. legume 2. "Guar is a robust, erect, herbaceous, annual legume"
5.03	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)	1. legume 2. "Like other legumes, guar is an excellent soil-building crop with respect to available nitrogen. Root nodules contain nitrogen-fixing bacteria, and crop residues, when plowed under, improve yields of succeeding crops." 3. "Guar is a robust, erect, herbaceous, annual legume"
5.04	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017)	No evidence of these specialized structures
6.01		No evidence
6.02	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 3. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	1. "Guar has an indeterminate growth habit, growing both vegetatively and setting pods from about 4–6 weeks following seedling emergence until death of the plant due to cold or annual decline." 2. "Pods are generally 1 1/2 to 4 in. long and contain 5 to 12 seeds each." 3. "Guar is propagated by seed."
6.03		No evidence
6.04	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017) 3. Baligar, V.C. and N. K. Fageria. 2007. Agronomy and Physiology of Tropical Cover Crops. <i>Journal of Plant Nutrition</i> 30: 1287–1339. (Accessed: 25 April 2017)	1. "Guar flowers are self-pollinating." 2. "Guar flowers are predominantly autogamous and very little cross-pollination occurs." 3. "Guar is completely self-fertile and is highly self-pollinated."
6.05	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017) 3. Baligar, V.C. and N. K. Fageria. 2007. Agronomy and Physiology of Tropical Cover Crops. <i>Journal of Plant Nutrition</i> 30: 1287–1339. (Accessed: 25 April 2017)	1. "Guar flowers are self-pollinating." 2. "Guar flowers are predominantly autogamous and very little cross-pollination occurs." 3. "Guar is completely self-fertile and is highly self-pollinated."
6.06		No evidence
6.07	1. Food and Agriculture Organization of the UN. Ecocrop. http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=830 (Accessed: 24 April 2017) 2. Engler & Prantl, <i>Natürl. Pflanzenfam.</i> 3(3): 259 (1894). http://proseanet.org/prosea/e-prosea_detail.php?frt=&id=3002 (Accessed: 25 April 2017)	1. "Green pods starts forming after 45-55 days and are generally harvested 50-90 days after sowing, seeds ripen after 90-160 days." 2. "Profuse and continuous flowering may start about one month after establishment. Flowers are cleistogamous, but in some cultivars natural crossing may be as high as 9%. Pod formation starts 45–55 days after sowing and peaks after 75–80 days. Seeds ripen 110–160 days after sowing."

7.01	1. USDA Plants Database. https://plants.usda.gov/core/profile?symbol=CYTE11 (Accessed: 25 April 2017) 2. Useful Tropical Plants. http://tropical.theferns.info/viewtropical.php?id=Cyamopsis+tetragonoloba (Accessed: 25 April 2017)	No evidence, unlikely because there is no mechanism of attachment
7.02	1. UF IFAS EDIS. http://edis.ifas.ufl.edu/mv075 (Accessed: 21 April 2017) 2. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017)	1. "According to the American Society of Agronomy, the primary importance of guar is the commercial value of its seed gum (galactomannan gum). This gum has a wide variety of food and non-food uses." 2. "introduced into the United States from India in 1903. Commercial production of guar in the United States began in the early 1950s and has been concentrated in northern Texas and southwestern Oklahoma."; "World demand for guar has increased in recent years, leading to crop introductions in several countries."
7.03		No evidence
7.04	1. USDA Plants Database. https://plants.usda.gov/core/profile?symbol=CYTE11 (Accessed: 25 April 2017) 2. Useful Tropical Plants. http://tropical.theferns.info/viewtropical.php?id=Cyamopsis+tetragonoloba (Accessed: 25 April 2017)	No evidence, unlikely because the seeds and pods not have adaptation for wind dispersal
7.05		No evidence
7.06		No evidence
7.07	1. USDA Plants Database. https://plants.usda.gov/core/profile?symbol=CYTE11 (Accessed: 25 April 2017) 2. Useful Tropical Plants. http://tropical.theferns.info/viewtropical.php?id=Cyamopsis+tetragonoloba (Accessed: 25 April 2017)	No evidence, unlikely because there is no mechanism of attachment
7.08		No evidence
8.01	1. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017) 2. Ecoport. http://ecoport.org/ep?Plant=830&entityType=PL****&entityDisplayCategory=full (Accessed: 25 April 2017)	1. "Pods are generally 1 1/2 to 4 in. long and contain 5 to 12 seeds each." 2. "The seed number per pod normally ranges from 5 to 12. The seeds are light- grey, pink, white or black in colour and about 5 mm long."
8.02		No evidence
8.03	1. University of Wisconsin and University of Minnesota. https://hort.purdue.edu/newcrop/afcm/guar.html (Accessed: 21 April 2017)	1. "Treflan (trifluralin) is registered for use on guar as a preplant incorporated treatment to control most annual grass and several annual broadleaf weeds. Follow label instructions carefully for different soil types."
8.04		No evidence of resprouting, so it is unlikely that it is tolerant
8.05		No evidence