

<i>Paulownia elongata</i> (Elongate paulownia)		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 FL climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	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 regions with an average of 11-60 inches of annual precipitation	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	n	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
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	n	0
4.06	Host for recognised pests and pathogens		
4.07	Causes allergies or is otherwise toxic to humans	n	0
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.	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets	n	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		
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	y	1
6.04	Self-compatible or apomictic	?	
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)	3	0

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		
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	?	
7.06	Propagules bird dispersed	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	?	
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	?	
8.03	Well controlled by herbicides	?	
8.04	Tolerates, or benefits from, mutilation or cultivation	y	1
8.05	Effective natural enemies present in U.S.		
	Total Score		6
	Implemented Pacific Second Screening		Yes
	Risk Assessment Results		Accept

	Reference	Source data
1.01		Cultivated, but no evidence of selection for reduced weediness.
1.02		Skip to question 2.01 since question 1.01 received a No.
1.03		Skip to question 2.01 since question 1.01 received a No.
2.01	<p>1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnnd.tif). 2. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. Available: http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?405679. 3. Flora of China. Available: http://flora.huh.harvard.edu/china/index.html. Accessed: 11/22/2010. 4. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i>. <i>Plant Biology</i> 3: 113-115.</p>	<p>No computer analysis was performed. 1. Global plant hardiness zones: 6-8 (USDA 6-8). 2. Native to: Asia-Temperate (China: Anhui, Hebei, Henan, Hubei, Jiangsu, Shannxi, Shandong, Shanxi); Cultivated: Asia-Temperate (China). 3. Wild or cultivated; low elevations. Anhui, Hebei, Henan, Hubei, Jiangsu, Shannxi, Shandong, Shanxi. 4. <i>Paulownia</i> is an economically important genus, which is native to China, and has been introduced to Japan, Australia, Brazil, Europe, and the U.S.A.</p>
2.02		No computer analysis was performed. Native range is well known; refer to 2.01 source data.
2.03	<p>1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. Available: http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?405679 [11/22/2010]. 3. Flora of China. Available: http://flora.huh.harvard.edu/china/index.html. Accessed: 11/22/2010. 4. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i>. <i>Plant Biology</i> 3: 113-115. 5. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford, UK : CAB International.</p>	<p>1. Distribution in the native and cultivated ranges is widespread; at least 3 climatic groups. 2. Native to: Asia-Temperate (China: Anhui, Hebei, Henan, Hubei, Jiangsu, Shannxi, Shandong, Shanxi); Cultivated: Asia-Temperate (China). 3. Wild or cultivated; low elevations. Anhui, Hebei, Henan, Hubei, Jiangsu, Shannxi, Shandong, Shanxi. 4. <i>Paulownia</i> is an economically important genus, which is native to China, and has been introduced to Japan, Australia, Brazil, Europe, and the U.S.A. 5. Adapted to a variety of climate types.</p>
2.04	<p>1. Globalis (http://globalis.gvu.unu.edu/ [Accessed: 9/23/2010]).</p>	<p>1. China: Anhui, Hebei, Henan, Hubei, Jiangsu, Shannxi, Shandong, Shanxi = 400-1000 mm (15.7-39.0 in).</p>

2.05	<p>1. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i> . <i>Plant Biology</i> 3: 113-115. 2. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.</p>	<p>1. <i>Paulownia</i> is an economically important genus, and has been introduced to Japan, Australia, Brazil, Europe, and the U.S.A. 2.a. Widely introduced to south Liaoning and south China. 2.b. China [Anhui (natural); Guangdong (planted); Gugangxi (planted); Hebei (natural & planted); Henan (natural & planted); Jiangsu (natural); Liaoning (planted); Shaanxi (natural); Shandong (natural & planted); Shanxi (natural & planted); Yunnan (planted)]; India (planted); Pakistan (planted); U.S.A. [North Carolina (planted)].</p>
3.01		No evidence.
3.02	<p>1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.</p>	<p>1. It is commonly cultivated as a roadside tree.</p>
3.03	<p>1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International. 2. Zhaohua, Z. A New Farming System--Crop/Paulownia Intercropping. <i>In</i> : Multipurpose Tree Species for Small-Farm Use: Proceedings of an international workshop held November 2-5, 1987 in Pattaya, Thailand. <i>Ed</i> .: Dale Withington, Kenneth G. MacDicken, Cherla B. Sastry, Norma R. Adams. Winrock International Institute for Agricultural Development, USA and International Development Research Centre of Canada, 1988.</p>	<p>1. It is commonly intercropped with agricultural crops. 2. When fields are intercropped with Paulownia, changes brought about in temperature, humidity, wind velocity, and evapotranspiration are generally favorable to food crops. Thus, the trees help protect crops against natural disasters such as drought, wind, sandstorms, dry and hot winds, and early and late frosts. Intercropping also reduced the consumption of water in the field.</p>
3.04		No evidence.

3.05	<p>1.a-b. Global Invasive Species Database (ISSG). Available: http://www.issg.org/database/species/ecology.asp?si=440&fr=1st [2010, January 20]. 2.a-d. TN-EPPC Invasive Exotic Pest Plants in Tennessee December 2009 (2nd Edition). Available: http://www.tneppc.org/invasive_plants [2010, January 27]. 3. Missouri Botanical Garden, Kemper Center for Home Gardening. <i>Paulownia tomentosa</i>. Available: http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=A888 [2010, January 22]. 4. Innes, Robin J. 2009. <i>Paulownia tomentosa</i>. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2010, January 22]. 5. Horticipia A-Z. CD-ROM database.</p>	<p>1.a. A highly adaptable 'escapee,' <i>P. tomentosa</i> is found in many site, soil, and forest type conditions, including soils commonly found in the order Alfisols. 1.b. Like most pioneer species, <i>P. tomentosa</i> needs bare soil, sufficient moisture, and direct sunlight for good seedling establishment. 2.a. Listed as a Severe Threat on TNEPPC List (possess invasive characteristics; spread easily in native plant communities and displace native vegetation); often found on roadsides, stream banks, and disturbed habitats, including fire sites, forests defoliated by pests (e.g., gypsy moths), and landslides. 2.b. Sprouts prolifically from adventitious buds on stems and roots allow it to survive fire, cutting, and even bulldozing in construction areas. 2.c. <i>Paulownia</i> can colonize rocky cliffs and scoured riparian zones where it may compete with rare plants in these marginal habitats. 2.d. Can reproduce from seed or from root sprouts, the latter can grow to over 15 feet (5m) in a single year. 3. Will naturalize. 4.a. Princess tree frequently establishes and spreads after disturbances that create these conditions, such as fire, windstorms, pestilence, floods, landslides, and anthropogenic disturbances such as construction, cultivation, mining, and logging. 4.b. In the Southeast, it is typically considered a substantial or severe threat to native communities. 5. The tree is often considered a weed tree, and has naturalized in the edge of woodlands, along railroad rights-of-way, and in other areas of disturbed soil in eastern North America.</p>
4.01		
4.02	<p>1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford, UK : CAB International. 2. Zhaohua, Z. A New Farming System--Crop/Paulownia Intercropping. In: Multipurpose Tree Species for Small-Farm Use: Proceedings of an international workshop held November 2-5, 1987 in Pattaya, Thailand. Ed.: Dale Withington, Kenneth G. MacDicken, Cherla B. Sastry, Norma R. Adams. Winrock International Institute for Agricultural Development, USA and International Development Research Centre of Canada, 1988.</p>	<p>Unlikely because : 1. It is commonly intercropped with agricultural crops. 2. When fields are intercropped with Paulownia, changes brought about in temperature, humidity, wind velocity, and evapotranspiration are generally favorable to food crops. Thus, the trees help protect crops against natural disasters such as drought, wind, sandstorms, dry and hot winds, and early and late frosts. Intercropping also reduced the consumption of water in the field.</p>
4.03		

4.04	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International. 2. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i> . <i>Plant Biology</i> 3: 113-115.	1. The leaves and flowers are rich in nutrients and are widely used for fodder and green manure. 2. Leaves and flowers of <i>Paulownia</i> are rich in nitrogen, serving as good fertilizer and fodder.
4.05	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International. 2. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i> . <i>Plant Biology</i> 3: 113-115.	1. The leaves and flowers are rich in nutrients and are widely used for fodder and green manure. 2. Leaves and flowers of <i>Paulownia</i> are rich in nitrogen, serving as good fertilizer and fodder.
4.06		It doesn't appear that the species is a significant primary or alternate host of crop pests or pathogens.
4.07	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International. 2. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i> . <i>Plant Biology</i> 3: 113-115.	1. Leaves, flowers and fruits are traditionally used in Chinese medicine for relieving tracheitis. 2. Leaves and flowers of <i>Paulownia</i> have medicinal uses.
4.08	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.	1. Its wood has recently been used as a material for vehicles, such as in aeromodelling, the inner boards on planes, boats and oil tankers, due to its low flammability.
4.09	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.	<i>Paulownia elongata</i> is shade-intolerant with a large crown, big leaves and few branches. It is intolerant and usually cannot regenerate in a stand and occurs sporadically in the wild.
4.10	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International. 2. Ipekci, Z. et al. 2001. High frequency plant regeneration from nodal explants of <i>Paulownia elongata</i> . <i>Plant Biology</i> 3: 113-115. 3. Zhaohua, Z. A New Farming System--Crop/Paulownia Intercropping. <i>In</i> : Multipurpose Tree Species for Small-Farm Use: Proceedings of an international workshop held November 2-5, 1987 in Pattaya, Thailand. <i>Ed</i> .: Dale Withington, Kenneth G. MacDicken, Cherla B. Sastry, Norma R. Adams. Winrock International Institute for Agricultural Development, USA and International Development Research Centre of Canada, 1988.	1. This species is very sensitive to soil fertility, soil depth and soil texture, and only grows fast in loose soil under an intensive cultivation system. 2.a. Its tolerance to drought and soil extremes has made it commercially important for use in reclamation of surface-mined land. 2.b. Recently, there has been increased interest in this genus because of its potential use in reforestation of nutrient-poor soils. 3. The soil in this area (North China Plain) is alluvial and much of it is quite poor. It is sandy, saline, and alkaline.
4.11	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.	1. <i>Paulownia elongata</i> , a large-sized deciduous tree growing up to 20 m tall and 1 m in diameter, with a cylindrical, straight bole.

4.12	1.a-b. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.	1.a. It is intolerant and usually cannot regenerate in a stand and occurs sporadically in the wild. 1.b. <i>Paulownia elongata</i> , a large-sized deciduous tree growing up to 20 m tall and 1 m in diameter, with a cylindrical, straight bole.
5.01		Terrestrial
5.02	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.	1. <i>Paulownia elongata</i> , a large-sized deciduous tree growing up to 20 m tall and 1 m in diameter, with a cylindrical, straight bole.
5.03	1. USDA/ARS-GRIN [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. Available: http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?405679	Family: Scrophulariaceae
5.04	1. Joshee, Nirmal et al. 2009. Poster: Bioenergy Crops & Biofuels. Title: Experiments on <i>Paulownia elongata</i> to establish it as a bioenergy crop. American Society of Plant Biologists. Plant Biology 2009: Saturday, July 18 - Wednesday July 22, 2009. Honolulu, Hawaii.	1. The extensive tap root and the lateral root system of <i>Paulownia</i> stabilizes soil and remediates land.
6.01		
6.02	1. Bergmann, B.A. 1998. Propagation method influences first year field survival and growth of <i>Paulownia</i> . <i>New Forests</i> 16: 251-264.	1. <i>Paulownia</i> can be propagated readily from seed
6.03	1. Gonçalves, V.M.F. et al. 2008. Structural characterization of the acetylated heteroxylan from the natural hybrid <i>Paulownia elongata/Paulownia fortunei</i> . <i>Carbohydrate Research</i> 343(2): 256-266.	1. The first experimental plantation of the natural hybrid <i>Paulownia elongata/Paulownia fortunei</i> in northern Portugal occurred in 2003.
6.04	1. Non-native Woody Plants of Arkansas. Accessed 11/3/2010. http://www.hsu.edu/default.aspx?id=2543	Possibly, in comparison to its relative species, <i>P. tomentosa</i> : 1. Readily self-pollinates.
6.05	1. Bergmann, B.A. 1998. Propagation method influences first year field survival and growth of <i>Paulownia</i> . <i>New Forests</i> 16: 251-264.	1. <i>Paulownia</i> grown in intercropping systems and managed plantations have been shown to produce flowers for honey production.
6.06	1.a-b. Bergmann, B.A. 1998. Propagation method influences first year field survival and growth of <i>Paulownia</i> . <i>New Forests</i> 16: 251-264. 2. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford , UK : CAB International.	1.a. <i>Paulownia</i> does not require replanting after harvest because it regenerates from stump sprouts. 1.b. If fodder production is the goal, the ability to stump sprout prolifically is an asset that allows plants to be cut down more than once during the growing season. 2. <i>P. elongata</i> is mainly propagated by suckers.

6.07	1. Chaudhry, M.A. 1993. Phenological and morphological studies on different <i>Paulownia</i> species growing at Peshawar. <i>Pakistan Journal of Forestry</i> 43(4): 221-226.	1. Observations made on the phenology of three-year-old plants of 5 <i>Paulownia</i> species namely <i>P. australis</i> , <i>P. elongata</i> , <i>P. fortunei</i> , <i>P. tomentosa</i> and <i>P. forgesii</i> indicated that flower bud production occurred in the month of August in the first four species. <i>P. forgesii</i> did not produce any flower buds. The blooming took place in first week of March before foliation. <i>P. elongata</i> flowered earliest of the species in the first followed by <i>P. fortunei</i> in the second, <i>P. australis</i> and <i>P. tomentosa</i> in the third week of March. The fruit setting commenced in the first and second weeks of April in <i>P. australis</i> , <i>P. elongata</i> , <i>P. fortunei</i> ; and <i>P. tomentosa</i> . However, the fruit ripening period was found to vary in different species from the fourth week of August to first week of October. The percentage of inflorescence bearing plants was 88 in <i>P. elongata</i> , 61 in <i>P. fortunei</i> , 35.5 in <i>P. tomentosa</i> and 30.1 in <i>P. australis</i> . The number of flowers/cyme varied from 2-5 in <i>P. australis</i> and <i>P. elongata</i> and 3-5 in <i>P. fortunei</i> and <i>P. tomentosa</i> .
7.01	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford, UK : CAB International.	1. It is commonly cultivated as a roadside tree and is intercropped with agricultural crops. Intercrops include wheat, broomcorn (<i>Sorghum bicolor</i>), tobacco, peanut, garlic etc.
7.02	1. CAB International, 2010. <i>Paulownia elongata</i> [original text by AN Author]. In: Forestry Compendium. Wallingford, UK : CAB International.	1. It is commonly cultivated as a roadside tree and is intercropped with agricultural crops. Intercrops include wheat, broomcorn (<i>Sorghum bicolor</i>), tobacco, peanut, garlic etc.
7.03		
7.04	1. Sosef, M.S.M. & Van der Maesen, L.J.G., 1997. <i>Paulownia</i> Siebold & Zucc.[Internet] Record from Proseabase. Faridah Hanum, I & van der Maesen, L.J.G. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia. http://www.proseanet.org . Accessed from Internet: 11/22/2010.	1. Seed winged.
7.05	1. TN-EPPC Invasive Exotic Pest Plants in Tennessee December 2009 (2nd Edition). Available: http://www.tneppc.org/invasive_plants [2010, January 27]. 2. Innes, Robin J. 2009. <i>Paulowina tomentosa</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2010, January 22].	Possibly, in comparison to its relative species, <i>P. tomentosa</i> : 1. Seeds are easily transported in water or wind. 2. Winged seeds are easily transported by wind and water over considerable distances; seedling have been observed more than 2 miles (3 km) from parent species in mountainous regions of NC and TN.

7.06	1. Flora of China. Available: http://flora.huh.harvard.edu/china/index.html . Accessed: 11/22/2010.	No means of external attachment and no evidence that seed is consumed: 1. Capsule ovoid, rarely ovoidellipsoid, 3.5–5 cm, stellate tomentose; persistent calyx disc-shaped; beak 4–5 mm; pericarp 1–2.5 mm. Seeds 4–5 mm including wing.
7.07	1. Flora of China. Available: http://flora.huh.harvard.edu/china/index.html . Accessed: 11/22/2010.	No means of external attachment: 1. Capsule ovoid, rarely ovoidellipsoid, 3.5–5 cm, stellate tomentose; persistent calyx disc-shaped; beak 4–5 mm; pericarp 1–2.5 mm. Seeds 4–5 mm including wing.
7.08	1. Flora of China. Available: http://flora.huh.harvard.edu/china/index.html . Accessed: 11/22/2010.	No evidence that seed is consumed: 1. Capsule ovoid, rarely ovoidellipsoid, 3.5–5 cm, stellate tomentose; persistent calyx disc-shaped; beak 4–5 mm; pericarp 1–2.5 mm. Seeds 4–5 mm including wing.
8.01	1.a-b. Global Invasive Species Database (ISSG). Available: http://www.issg.org/database/species/ecology.asp?si=440&fr=1st [2010, January 20]. 1.a. Innes, Robin J. 2009. <i>Paulownia tomentosa</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2010, January 22].	Possibly, in comparison to its relative species, <i>P. tomentosa</i> : 1.a. Each capsule contains up to 2000 seeds (a large tree may produce as many as 20 million seeds a year). 1.b. When <i>P. tomentosa</i> trees start bearing seed they are very prolific.
8.02	1. Global Invasive Species Database (ISSG). Available: http://www.issg.org/database/species/ecology.asp?si=440&fr=1st [2010, January 20].	Possibly, in comparison to its relative species, <i>P. tomentosa</i> : 1. Seeds can remain in a seed bank for at least 3 years becoming dormant sometime in the late summer with very little seed predation.

8.03	<p>1.a. Innes, Robin J. 2009. <i>Paulownia tomentosa</i> . In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/ [2010, January 22].</p>	<p>Possibly, in comparison to its relative species, <i>P. tomentosa</i> : 1.a. Foliar spray methods should be considered for large thickets of <i>Paulownia</i> seedlings where risk to non-target species is minimal and temperature should be above 65°F = Glyphosate at 2% or Triclopyr at 2%. 1.b. Cut stump control method should be considered when treating individual trees or where the presence of desirable species preclude foliar application, and as long as ground does not freeze = Glyphosate at 25% covering outer 50% of the stump or Triclopyr at 50% covering outer 20% of the stump. 1.c. Basal Bark Method is effective throughout the year as long as the ground is not frozen. Apply a mixture of 25% triclopyr and 75% horticultural oil to the basal parts of the tree to a height of 30-38 cm (12-15 in) from the ground. 1.d. Hack and Squirt, make cuts at 6.5 cm (3 in) intervals around the trunk of the tree between 15-45 cm (6-18 in) above the ground. Be sure that each cut goes well into or below the cambium layer. Immediately treat the cut with a 50% glyphosate or triclopyr and water herbicide solution. 2. <i>Paulownia tomentosa</i> can be controlled most effectively using an integrated management approach. Cutting or girdling trees with power or manual saws are effective at preventing seed production, but repeated cutting or a herbicide treatment is necessary following cutting since <i>Paulownia</i> readily resprouts.</p>
8.04	<p>1.a-b. Bergmann, B.A. 1998. Propagation method influences first year field survival and growth of <i>Paulownia</i> . <i>New Forests</i> 16: 251-264.</p>	<p>1.a. <i>Paulownia</i> does not require replanting after harvest because it regenerates from stump sprouts. 1.b. If fodder production is the goal, the ability to stump sprout prolifically is an asset that allows plants to be cut down more than once during the growing season.</p>
8.05		