Texas Department of Agriculture

Noxious and Invasive Plant List (34 spp.)

NOXIOUS PLANTS	*Tamarix* (6 sp.) – Saltcedar
Alternanthera philoxeroides – alligatorweed	*Salvinia* (2 sp.) - Salvinia
Cardiospermum halicacabum - balloonvine	*Nassella trichotoma* - Serrated tussock
Schinus terebinthifolius - Brazilian peppertree	*Panicum repens* - Torpedograss
Orobanche ramosa - broomrape	*Solanum viarum* - Tropical soda apple
Alhagi camelorum - camelthorn	*Ipomoea aquatica* - water spinach
Triadica sebifera - Chinese tallow tree	*Eichhornia crassipes* – waterhyacinth
Myriophyllum spicatum - Eurasian watermilfoil	*Pistia stratiotes* – waterlettuce
Spirodela oligorrhiza - giant duckweed	
Arundo donax - giant reed	**INVASIVE PLANTS**
Calystegia sepium - hedge bindweed	*Triadica sebifera* - Chinese tallow tree
Hydrilla verticillata – hydrilla	*Arundo donax* - giant reed
Rottboellia cochinchinensis - itchgrass	*Pueraria montana* var. *lobata* – kudzu
Cuscuta japonica - Japanese dodder	*Tamarix* (6 sp.) – Saltcedar
Pueraria montana var. *lobata* – kudzu	*Lygodium japonicum* – Japanese climbing fern
Lagarosiphon major - lagarosiphon	*Melia azederach* – Chinaberry
Melaleuca quinquenervia - paperbark	
Lythrum salicaria - purple loosestrife	
Eichhornia azurea - rooted waterhyacinth	

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HELLO INVASIVE SPECIES.
GOODBYE TEXAS.

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HELLO BASTARD CABBAGE. GOODBYE BLUEBONNETS.

Bastard cabbage - Don't let it if fool you! The bright yellow flowers towering over the blues and reds of our native bluebonnets and Indian paintbrush are an invasive species with an overwhelming presence along Texas' roadways. Rapistrum rugosom (AKA Bastard Cabbage) is taking up space and resources meant for our native wildflowers. This is not going un-noticed by Texans, and there is a rising level of concern over the spread of bastard cabbage.

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DO YOUR PART TO STOP THE SPREAD!

ALERT

GIANT SALVINIA
SALVINIA MOLESTA
BRAZIL | AQUATIC INVASIVE

ALERT

SOAPBERRY BORER
AGRILUS PRIONURUS
MEXICO | WOOD BORING BEETLE

ALERT

JAPANESE CLIMBING FERN
LYGODIUM JAPONICUM
EAST ASIA | FOREST THREAT

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INVASIVE PLANT INVENTORY

TEXAS INVASIVE PLANT INVENTORY

Please read the information on the Texas Invasive Plant Inventory including how plants were listed and what the ratings mean. Click on the scientific name to go to the assessment. Key to abbreviations: IMP - Impact, INV - Invasiveness, DIST - Distribution, DOC - Documentation.

Records 1 to 20 of 28: First | Previous | Next | Last

NAME	RATING	IMP	INV	DIST	ALERT	DOC
Ailanthus altissima Tree of heaven	Moderate	B	B	A	N	3.08
Alternanthera philoxeroides Alligatorweed	Moderate	B	B	A	N	3.23
Arundo donax Giant reed	High	A	B	A	N	3.84
Bothriochloa ischaemum var. songarica King Ranch bluestem	Not listed	B	B	U	N	2
Broussonetia papyrifera Paper mulberry	Moderate	B	B	A	N	2.61
Centaurea melitensis Malta star-thistle	Moderate	B	A	A	N	3.15
Colocasia esculenta Elephant ears	Moderate	B	A	A	N	2.5
Cryptostegia grandiflora	High	A	B	B	N	3.69

The Texas Invasive Plant Inventory

Inventory Results (N=30)

SYMBOL	Species	Common Name	Overall	Alert	Impact	Invasiveness	Distribution	Document.	COA	FED	TDA	TPWD
AIAL	*Ailanthus altissima*	Tree of heaven	Moderate	no	B	B	A	3.08	*			
ALPH	*Alternanthera philoxeroides*	Alligatorweed	Moderate	no	B	B	A	3.23			*	*
ARDO4	*Arundo donax*	Giant cane	High	no	A	B	A	3.84	*		*	
BOISS	*Bothriochloa ischaemum*	King Ranch blue stem	Unknown	no	B	B	U	2	*			
BRPA4	*Broussonetia papyrifera*	Paper mulberry	Moderate	no	B	B	A	2.16	*			
CEME2	*Centaurea melitensis*	Malta star thistle	Moderate	no	B	A	A	3.15	*			
COES	*Colocasia esculenta*	Elephant ear	Moderate	no	B	A	A	2.5	*			
CRGR6	*Cryptostegia grandiflora*	rubber vine	High	no	A	B	B	3.69				
CYDA	*Cynodon dactylon*	Bermudagrass	Moderate	no	B	B	A	2.7	*			
CYFA2	*Cyrtomium falcatum*	Hollyfern	Low*	no	B	C	A	1.14	*			
EICR	*Eichhornia crassipes*	Water hyacinth	High	no	A	A	A	3.3	*		*	*
FISI2	*Firmiana simplex*	Chinese parasoltree	Moderate	no	B	B	A	2	*			
HYVE3	*Hydrilla verticillata*	Hydrilla	High	no	A	A	A	3.38	*	*	*	*
IMCY	*Imperata cylindrica*	Cogongrass	High	yes	A	A	C	3.5		*		
IPAQ	Ipomoea aquatica	Water spinach								*	*	*
LILU2	*Ligustrum lucidum*	Glossy Privet	High	no	A	A	A	3.41	*			
LOJA	*Lonicera japonica*	Jap. honeysuckle	Moderate	no	B	B	A	3	*			
LYJA	Lygodium japonicum	Jap. climbing fern	High	no	A	A	A	2.9				
MAUN3	*Macfadyena unguis-cati*	Cat claw vine	Moderate	no	B	A	A	2.15	*			
MEAZ	*Melia azedarach*	Chinaberry	High	no	A	B	A	2.69	*			
MYAQ2	*Myriophyllum aquaticum*	Parrotfeather	High	no	A	A	B	3.76			*	
NADO	*Nandina domestica*	Heavenly bamboo	Moderate	no	C	A	A	2.8	*			
PHAU8	*Phyllostachys aurea*	Golden bamboo	High	no	A	B	A	2.61	*			
PICH4	*Pistacia chinensis*	Chinese pistache	Moderate	no	B	B	A	1.6	*			
PUMOL	*Pueraria montana var. lobata*	Kudzu	High	no*	A	B	A	2.8	*		*	
PYCO2	*Pyracantha coccinea*	Pyracantha	Moderate	no	C	B	A	2.15	*			
RARU	*Rapistrum rugosum*	Bastard cabbage	High	no	A	B	A	2.92	*			
SOHA	*Sorghum halepense*	Johnson grass	High	no	A	A	A	3	*			
TARA	*Tamarix ramosissima*	Salt cedar	High	no	A	B	A	3.15	*		*	
TRSE6	*Triadica sebifera*	Chinese tallow	Moderate	no	B	B	A	3.15	*		*	

Key	**TDA Noxious and Invasive List**
	Already Listed
	Newly Listed
	Submitted for Listing

Candidate for TDA Noxious and Invasive Plant List

Presented to the Texas Invasive Species Coordinating Committee

COGONGRASS

Imperata cylindrica

Damon Waitt, PhD
Senior Director and Botanist
Lady Bird Johnson Wildflower Center
at the University of Texas at Austin

Imperata cylindrica

Cogongrass

DESCRIPTION

- Cogongrass is a perennial, rhizomatous grass that grows from 2 to over 4 feet in height.
- The leaves are about an inch wide, have a prominent white midrib, and end in a sharp point.
- Leaf margins are finely toothed and are embedded with silica crystals.
- The flowers are arranged in a silvery, cylindrical, branching structure, or panicle, about 3-11 inches long and 1 1/2 inches wide.

Imperata cylindrica

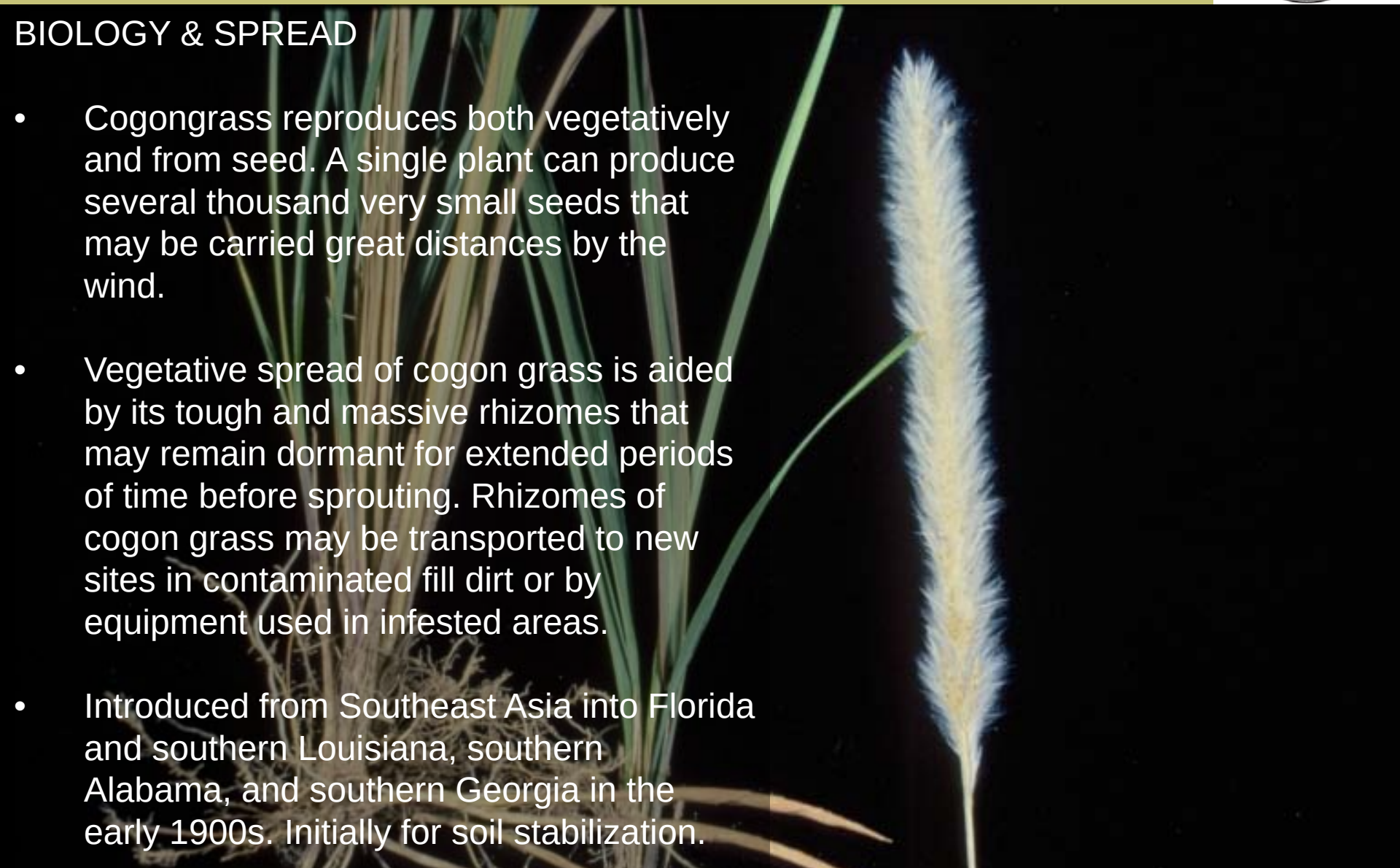
Cogongrass

ECOLOGICAL THREAT

- Cogongrass can invade and overtake disturbed ecosystems, forming a dense mat of thatch and leaves that makes it nearly impossible for other plants to coexist.
- Large infestations of cogon grass can alter the normal fire regime of a fire-driven ecosystem by causing more frequent and intense fires that injure or destroy native plants.
- Cogongrass displaces a large variety of native plant species used by native animals (e.g., insects, mammals, and birds) as forage, host plants and shelter.
- Some ground-nesting species have also been known to be displaced due to the dense cover that cogon grass creates.

Imperata cylindrica

Cogongrass



BIOLOGY & SPREAD

- Cogongrass reproduces both vegetatively and from seed. A single plant can produce several thousand very small seeds that may be carried great distances by the wind.

- Vegetative spread of cogon grass is aided by its tough and massive rhizomes that may remain dormant for extended periods of time before sprouting. Rhizomes of cogon grass may be transported to new sites in contaminated fill dirt or by equipment used in infested areas.

- Introduced from Southeast Asia into Florida and southern Louisiana, southern Alabama, and southern Georgia in the early 1900s. Initially for soil stabilization.

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IMPERATA CYLINDRICA - COGONGRASS

View record in Invasive Plant database.
Download Assessment: PDF.

SUMMARY

RATING	ALERT	IMPACT	INVASIVENESS	DISTRIBUTION	DOC.
High	Y	A	A	C	3.5

Comments:

Rating	Alert	Scores	Documentation
1 = High	Y = Yes	A = Severe	4 = Reviewed scientific publications
2 = Moderate	N = No	B = Moderate	3 = Other published material
3 = Limited		C = Limited	2 = Observational
4 = Evaluated, not listed		D = None	1 = Anecdotal
		U = Unknown	0 = No information

Scores												
1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2
A	A	A	D	A	A	C	A	A	A	A	C	D

The Texas Invasive Plant Inventory

Section 1. Ecological Impact – A (Severe)

1.1 Impact on abiotic ecosystem – A

- Research indicates that cogongrass contains allopathic substances that may inhibit germination and seedling growth for adjacent grasses. Cogongrass is documented to reduce soil pH thus increasing soil acidity and suppressing growth of surrounding species. Soil nitrate levels are also found to be lower in cogongrass infested areas, and this is attributed to the aggressive growth pattern, extensive rhizome system, and long growing season of this species. Lower nutrient levels can impede the establishment and success of native species.

- Cogongrass can alter fire regimes by increasing fire intensity and duration. It can also increase a fire's rate of spread and can induce crown fires, which destroy mature stands of timber.

The Texas Invasive Plant Inventory

Section 1. Ecological Impact – A (Severe)

1.2 Impact on native plant community composition, structure, and interactions - A

- Cogongrass is a C4 perennial grass that is documented to out-compete native species, create monocultures, and increase fire intensity in forested areas. Cogongrass has a high ability to extract soil moisture from shallow soil layers making it difficult for other, potentially more desirable, perennial grasses to become established. Species that can out-compete cogongrass have a deeper root system and a potentially taller canopy. These interactions can disrupt natural successional cycles and alter plant community composition.

- Cogongrass can also impact adjacent plants through physical injury, as the hard pointed rhizomes can penetrate the roots, bulbs and tubers of other species. Cogongrass is a fire-adapted species and is capable of growing in moderately shaded areas. It is documented to increase fire duration and intensity. This increase can kill native species, limit secondary succession, increase cogongrass dominance, and further alter plant diversity and composition.

The Texas Invasive Plant Inventory

Section 1. Ecological Impact – A (Severe)

1.3 Impact on higher trophic levels, including vertebrates and invertebrates - A

- Cogongrass increases fire intensity in pine-based ecosystems up to 15-20%. This alters secondary succession, and potentially reduces forage foods, refugia, and nesting habitat for insects, birds and mammals. Increased fire intensity may also result in mortality of higher trophic level species.

- Cogongrass stands are considered poor habitat for most southeastern wildlife species, as it generally grows taller (3x) than native grasses. This height increase may disrupt the above-ground movement of small animals, while its dense rhizomes can displace ground-dwelling species. Studies indicate that in central Florida habitat quality of two keystone animals, gopher tortoises and scarab beetles, is reduced in cogongrass-invaded sites compared to un-invaded sites.

1.4 Impact on genetic integrity of native species (i.e. potential for hybridization) - D

- Cogongrass is genetically and morphologically similar to *Imperata brasiliensis*, and hybridization with this species is common. Hybrids are capable of producing viable offspring. However, I. brasiliensis is also a nonnative species; there are no known occurrences of hybridization with native species.

The Texas Invasive Plant Inventory

Section 2. Invasive Potential – 19 (A) Severe

2.1 Ability to establish without anthropogenic or natural disturbance – A (Severe)

- Cogongrass can become established in disturbed and undisturbed areas. It is documented to rapidly invade disturbed areas, specifically those cultivated or tilled for row crop production and construction of right-of-ways.
- In its native range, cogongrass colonizes areas following a climax event, usually a fire, and populations decline upon canopy closure. However, in the U.S., it continues to thrive because invaded forests of the southeast generally have a more open canopy cover (i.e., pine dominated) and due to forest management practices.

2.2 Local rate of spread with no management – A (Severe)

- Cogongrass is a prolific seeder and rhizomes have an aggressive asexual regenerative capacity. In established populations, rhizomes are the primary method of localized spread. They are also believed to be primarily responsible for the establishment of new populations, as rhizome pieces spread in contaminated fill dirt.

2.3 Recent trend in total area infested within state – C (Limited)

- In 2006 a five to six acre population was found in East Texas. This population was treated, and has been preventively treated every year since.

The Texas Invasive Plant Inventory

Section 2. Invasive Potential – 19 (A) Severe

2.4 Innate reproductive potential (based on multiple characteristics) – A (Severe)

Worksheet A	
Reaches reproductive maturity in 2 years or less	**1**
Dense infestations produce >1,000 viable seed per square meter	**2**
Populations of this species produce seeds every year.	**1**
Seed production sustained over 3 or more months within a population annually	**1**
Seeds remain viable in soil for three or more years	**0**
Viable seed produced with *both* self-pollination and cross-pollination	**0**
Has quickly spreading vegetative structures that may root at nodes	**1**
Fragments easily and fragments can become established elsewhere	**2**
Resprouts readily when cut, grazed, or burned	**1**
Total	**9**

- **High Reproductive potential (6 or more points)**

The Texas Invasive Plant Inventory

Section 2. Invasive Potential – 19 (A) Severe

2.5 Potential for human-caused dispersal – A (Severe)

- Cogongrass rhizomes may be transported via contaminated fill dirt or machinery. Roads and road construction are important corridors for dispersal. It is also dispersed as an ornamental.

2.6 Potential for natural long-distance (>1 km) dispersal – A (Severe)

- Long-distance dispersal is common, as cogongrass seeds are light-weight with long hairy plumes aiding in distribution. Studies indicate that wind can disperse seeds up to 15 miles in open areas, and move spikelets up to 360 feet from the parent plant.

2.7 Other regions invaded worldwide that are similar to Texas – A (Severe)

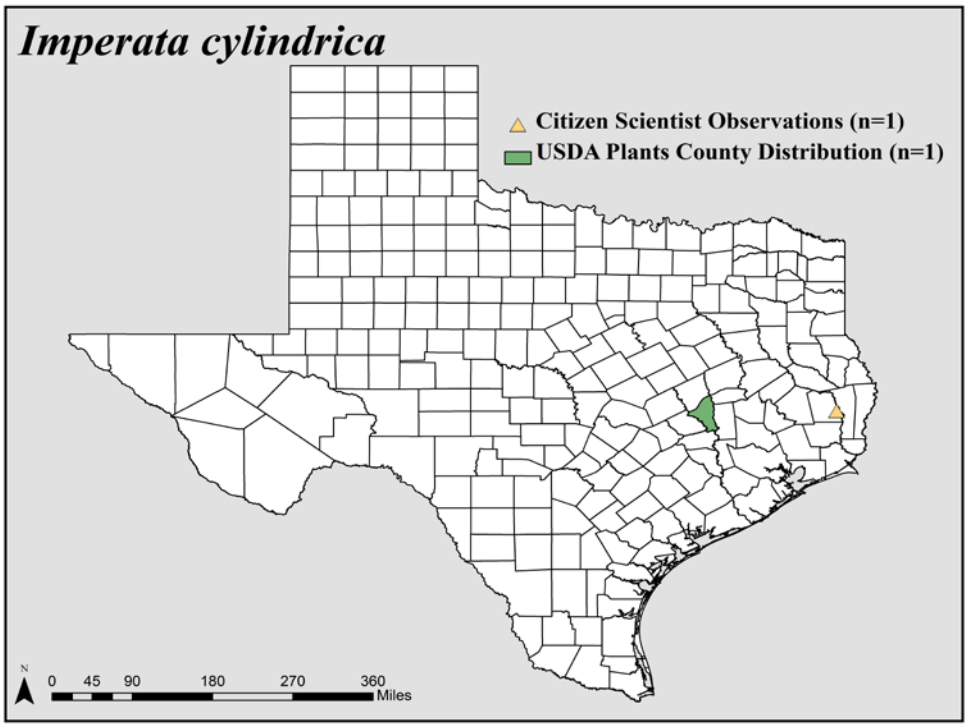
- Cogongrass grows in tropical and sub-tropical regions, and is considered a federal noxious weed throughout the southeastern U.S. This ecotype is most similar to our Coastal Prairies and East Texas Piney Woods, though cogongrass may become established in other Texas ecoregions and riparian areas.

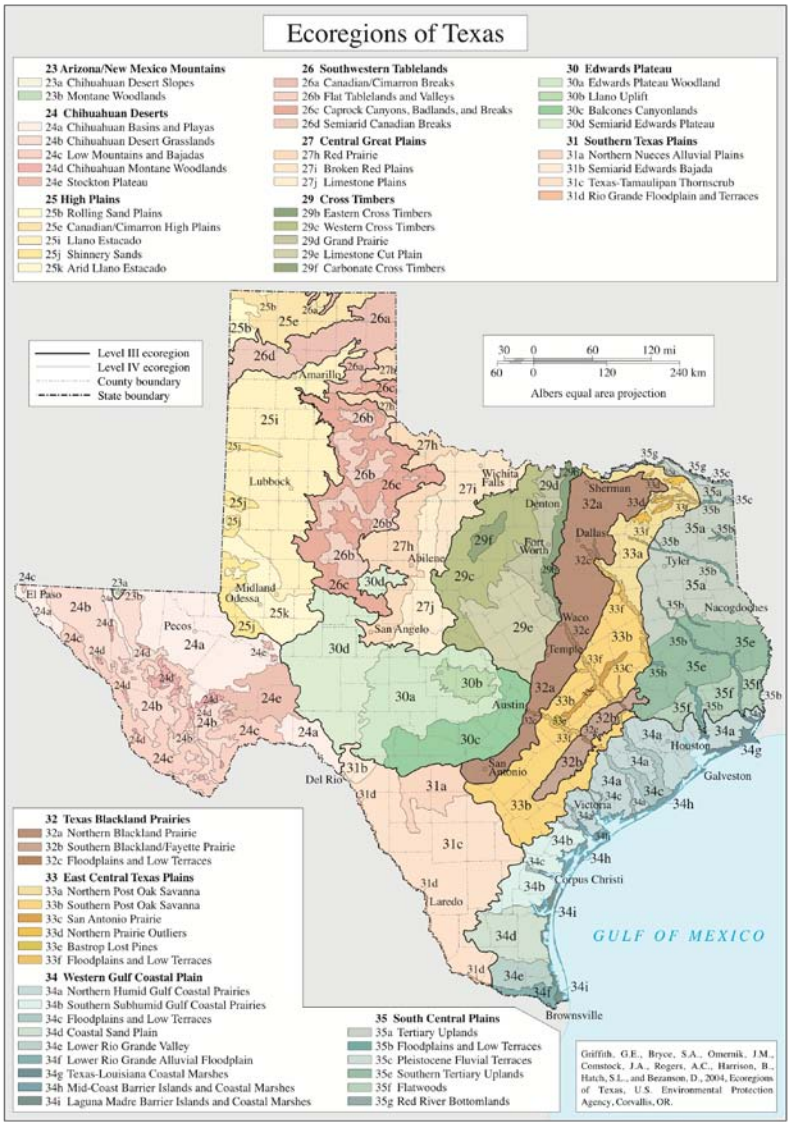
The Texas Invasive Plant Inventory

Section 3. Distribution – C (Limited)

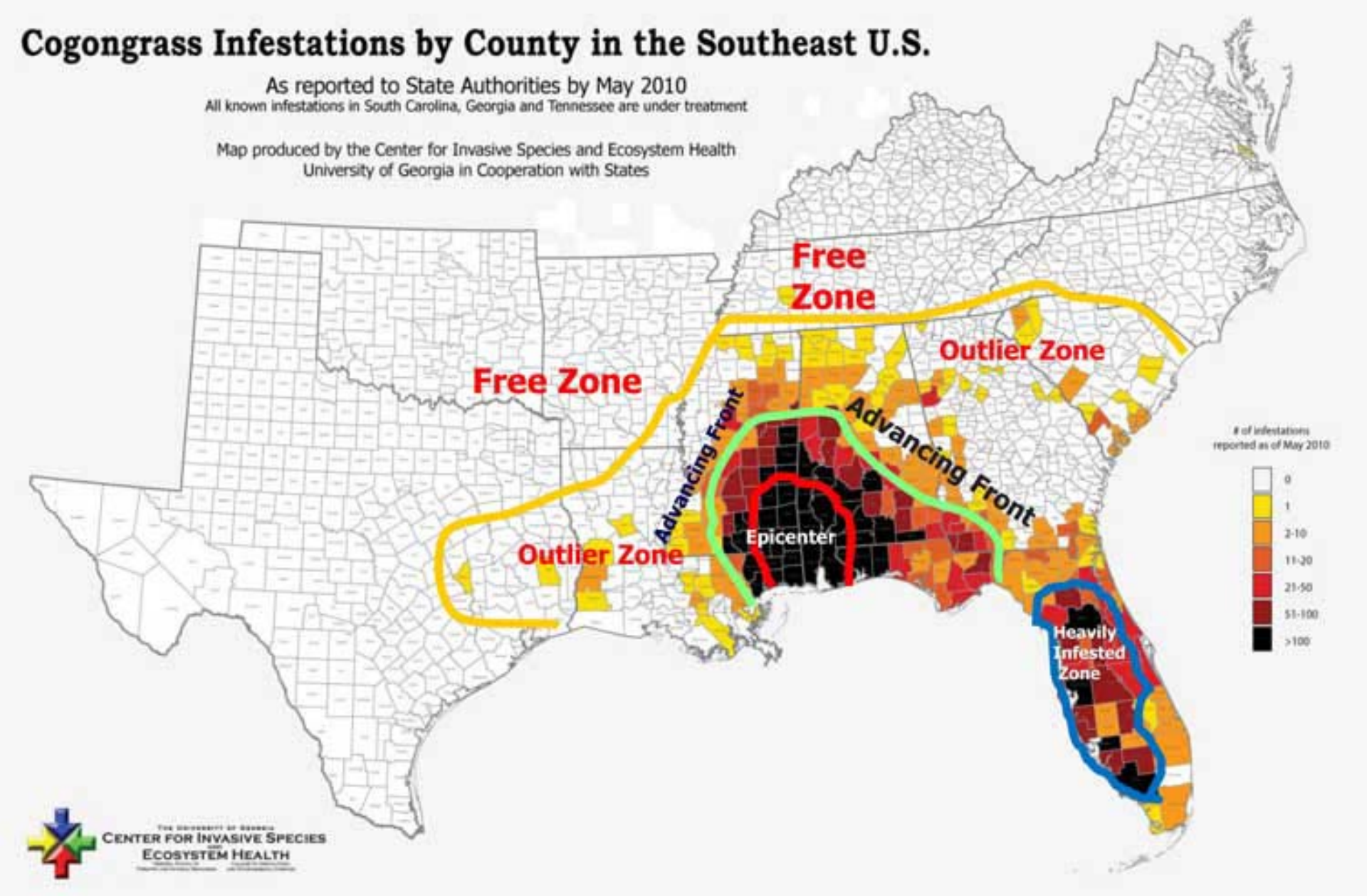
3.1 Ecological amplitude (ecological types invaded in Texas) – C (Limited)

3.2 Ecological intensity (highest extent of infestation in any one ecological type) - D (Narrow)





The Texas Invasive Plant Inventory



Candidate for TDA Noxious and Invasive Plant List

Economic Evaluation of Cogongrass

- Cogongrass is listed as a noxious weed by the U. S. Department of Agriculture and a Category I Invasive Species on the Florida Exotic Pest Plant Council Invasive Plants List, a Category I invasive plant in Georgia, and as a noxious weed on the Oregon Noxious Weed List.

- Cogongrass is considered to be one of the top ten worst “weeds” in the world, reported in 73 countries in a total of 35 different crops.

- Originally introduced in Alabama around 1911 as seed in packing materials, Cogongrass has spread between 500,000 and one million acres in the states of Alabama, Mississippi, and the Florida panhandle.

- Cogongrass is an opportunistic plant and invades a wide range of non-cultivated habitats including rights-of-way, forests, pastures, orchards, and waste areas. This species does not normally impact row-crop agriculture, but rapid adoption to reduced tillable practices could present a potential threat. Other industries potentially impacted by cogongrass include sod production and wildlife.

- Cogongrass stands represent a significant fire hazard (fuel source) for homeowners in forested areas, public conservation lands, and agricultural forests.

Imperata cylindrica

Cogongrass

Candidate for TDA Noxious and Invasive Plant List

Economic Evaluation of Cogongrass

- Cogongrass has been ranked as one of the ten worst weeds of the world. Outside of the United States, cogongrass has been reported as a problem in more than 35 annual and perennial crops, including rubber, coconut, oil palm, coffee, date, tea, citrus, forests, field crops (rice), and row crops (corn).

- Currently the most effective management strategies in the United States have involved integrating mechanical (e.g., discing, mowing), cultural (e.g., burning), chemical (e.g., herbicide applications of glyphosate and imazapyr), and revegetation methods. However, a single herbicide application can cost as much as $400/ha.

- Silica bodies in the leaves, razor-like leaf margins, relatively low yields, and very low nutritive and energy values make cogon grass a poor forage.

Imperata cylindrica

Cogongrass

Candidate for TDA Noxious and Invasive Plant List

Economic Evaluation of Cogongrass

- A study conducted in Florida found that the average cost of cogongrass control was $81.56 per acre of infestation and a potential state-wide average impact of cogongrass was $14,933,490.

- Presently, cogongrass is not as wide spread in Texas as adjacent southern states. According to recent communications with the Texas Department of Transportation, little information on treating cogongrass along roadsides is available; however, minor control does occur.

- Texas Forest Service research also indicated that cogongrass has not spread in Texas as intensively as other southern states; however, several small patches (4-5 acres) do occur throughout the eastern half of the state. The Texas Forest Service estimates that the total cost spent on control over the last 6 years isbetween $1,500 and $2,000 for these smaller stands. If infestation continues to increase, a proportional increase in cost efforts for control will occur.

Imperata cylindrica

Cogongrass

Imperata cylindrica

Cogongrass

Imperata cylindrica

Cogongrass 'Red Baron'

The 'Red Baron' cultivar of I. cylindrica has bright, showy, blood-red leaf edges. It is frequently sold across the U.S. in plant nurseries and is widely available over the Internet for ornamental use.

Red Baron' can occasionally lose the red color in their leaves over time (blades turn entirely green), becoming invasive.

The red color or pigmentation may be a result of colder temperatures, since plants often revert to the green type when planted in southern regions.