# STATUS ASSESSMENT RESPONSE FORM

Species (Botanical name): Osmanthus fortune	i	
(Common name): Fortune's Osmanth	us	
Where the voucher specimen is held: FLAS		
Assessment/ Reassessment completed	by: Deah Lieurance	
Date assessment started: 7/30/2017	Date assessment completed:	7/30/2017

## **INSTRUCTIONS**

*Either check appropriate response or enter it in the designated space. Attach additional sheets with evidence as necessary using appropriate section numbers.* 

SUMMARY OF ASSESSMENT RESULTS	
<b>BY STATE</b> If species is NOT invasive in Florida, check or	ne of the following three conclusions:
From Section A	Automatic Exemption
Use Predictive Tool	Prohibited
☑ Not considered a problem species at this	time
BY ZONE North: Central: South Index	North: Central: South
Score I = : :	<b>M</b> =
Category I = : : P =	: : M = V =
Conclusions North	
Central	
C (1	

# In case of incomplete assessment:

Where did assessment stop?

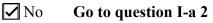
Who could provide the answer to this question?

<u>Autom</u>	ntic Exemption
Is this s	pecies listed on any federal or state noxious or prohibited plant lists?
🗌 Yes	Under "BY STATE" on page R-1 check Prohibited
🖌 No	Go to Section I-a below
800000000000000000000000000000000000000	

# **Step-by-Step Assessment Responses**

I-a Current Invasion in Florida
---------------------------------

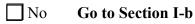
1. Is there a proposed or new use for a species that would result in higher propagule pressure\* in Florida? For example, cultivation of ≥2 contiguous ac of a species for bioenergy (corresponding to DPI biofuel rule), or commercial cultivation of a species present in Florida for a new use, or increase in acreage cultivated from 1-10 ac to 10 times that acreage (10-100 ac), 10-100 ac to 5 times that acreage (50 to 500 ac), or >100 ac to 2.5 times that acreage.



2. Does this species occur in any natural areas of Florida?

Yes Attach distribution records and Go to question I-a 3

- No Go to Section A
- 3. Does it **ONLY** occur in natural areas of Florida because it has persisted from its previous cultivation?
  - Yes Attach evidence of previous cultivation for each site and Go to Section A



Section A is on page R-3 and Section I-b is on page R-4

Check box if distribution records are attached

Check box if evidence of previous cultivation is attached

Sectio	on A	
A1	species, Sp	pecies hybridize with any Federal or Florida-listed Endangered or Threatened ecies of Special Concern, or economically important species (e.g., exhibit etic invasion)?
	Yes	Provide <i>information below</i> . Enter a conclusion on page R-17 of No <b>unless limited use approved. Go to Section D</b> for details on how to make a proposal for specified and limited use for the species.
	✓ No	Go to question A2
Section A1 If yes A2 A3	, then <i>provid</i>	e name of listed or economically important species & information sources:
A2	Has this sp 20 years if	ecies been introduced to Florida within the last 10 years if herbaceous, or last woody?
	Yes	Use Predictive Tool and so indicate on page R-1
	✓ No	Highlight attached distribution records that show presence in Florida before 10 or 20 years ago or attach other evidence and Go to question A3
A3		pecies have a record of causing problems in other regions with similar habitats e to Florida?
	Yes	Provide evidence below, Use Predictive Tool and so indicate on page R-1
	☑ No	<i>Enter a conclusion of</i> <b>Not considered a problem species at this time</b> <b>and may be recommended by IFAS faculty</b> <i>on page R-1</i> but reassess if invasion of natural areas is recorded or within 10 years, whichever is earlier.
If yes	, then give ev	vidence of where and what problems this species has caused:
		Section D is on page R-19

I-b Invasion Status in Three Zones of Florida

Check responses to the following questions for each zone (north, central, south) separately.

For "Yes" responses to questions 1-3, *distributional evidence of invasion* (forming self-sustaining and expanding populations within a plant community with which it has not previously been associated) *must be attached and distinguished for each zone*.

1.	Does species exist in areas outside its current, or former, cultivation in this zone? If <i>Yes</i> <b>Go to question I-b 2</b> If <i>No</i> <b>Go to question I-b 4</b>	North Yes No	Central Yes No	South Yes No
2.	Is species invading in this zone <b>ONLY</b> when natural disturbance regime and scale have been altered? If <i>Yes</i> <b>Go to question I-b 3</b> If <i>No (or unknown)</i> <b>Go to Section II-a</b>	North Yes No	Central Yes No	South Yes No
3.	Has this species ever been <b>known</b> to persist if the natural regime is resumed and the natural flora/communities recover? If <i>Yes (or unknown)</i> <b>Go to Section II-a</b> If <i>No</i> <b>Go to question I-b 4</b>	North Yes No	Central Yes No	South Yes No
4.	Are there other zones in which this species has invaded or persisted after restoration? If <i>Yes</i> indicate <b>I = 0 for this zone</b> on page R-1 then <b>Go to Section III-b</b> If <i>No</i> <b>Go to Section A</b>	North Yes No	Central Yes No	South Yes No
	Section II-a is on page R-5, Section III-b	is on page R-1	10, Section A	is on page R-3

Check box if distribution records by zone are attached

# II-a Known Impacts at WORST SITE(S) (without, or before, any control effort)

Add up points for ALL impact statements (i through vi) that are true at the <u>worst affected site(s) in</u> <u>that zone</u> then **Go to Section II-b**.

If scores are assigned, attach Ecological Impacts Worksheets that include citations and/or log of expert evidence.

Documentation of evidence of impacts for each zone (as defined in the Assessment Glossary) must be attached and include specific locations of observed impacts. If experts are providing evidence, their <u>written and signed observations</u> must be attached. Scientific names of impacted species (e.g., state-listed or native species with which hybridization occurs) must be included.

If there is no evidence of an impact then assign 0 points <u>unless</u> the impact is considered very likely (e.g., fixes  $N_2$  in low nutrient soil which can change the flora) OR the impact (except vi) has been demonstrated in similar habitats in other zones or outside the state, OR if only one expert has documented the impact within the zone under consideration. In these cases assign 0.5 points.

		Points	North	Central	South
i)	Long-term alterations in ecosystem processes	15			
ii)	Negatively impacted T & E species:				
	Documented loss has occurred	12			
	Loss is considered very likely	4			
iii)	Displaces or precludes native vegetation (see criteria in assessment)	8			
iv)	Changes community structure	4			
v)	Hybridizes with native or economic plants	4			
vi)	Covers over 15% of invaded stratum (unless iii)	1			
		Total			
				Section	II-b is on page R-6

Check box if Impacts Worksheet is attached

# II-b Range of Community Groups in Which Species is Invasive

Is this species known to be invasive in at least four community groups OR does it occur in at least one community group of each of the terrestrial and palustrine/aquatic lists?

If <i>Yes</i> list community groups below and multiply score from II-a by 1.5	North	Central	South
	Yes No	Yes No	Yes No
If No multiply score from II-a by 1.0	I =		

Copy these Impact scores to page R-1. If  $I \ge 12$ , Go to Section II-c on page R-7; If I < 12, Go to Section III-a on page R-9.

If yes, then *list relevant community groups for each zone*: **North**:

# Central:

South:

II-c Proportion of Invaded Natural Areas/Sites with Significant Impacts

Of the invaded sites, might any of the worst (statements i to v in Section II-a) impacts *only* occur under a few, identifiable, environmental conditions (i.e., conditions that occur in only 1 to 10% of the sites)?

To answer this question, for each statement in Section II-a, i - v that gets a score (> 0.5), determine the percentage from this table. Calculate the percentage separately for each zone.

		of Natural Area a <i>Yes</i> Answer*	s/Sites with	B) Tot	al Number of M Areas/Sites	Natural
	North	Central	South	North	Central	South
i)						
ii)						
iii)						
iv)						
v)						
TOTAL						
Total A/Total B x 100 = %						
	If the per	centage is betw	een 1-10% fro	om the table a	bove, check Y	es:
		North Yes No □ □	Central Yes No		h No □	
If Yes			tation of evide ets and <b>Go to</b> S		included in Ec	ological Impacts
If No	or No score	Go to See	ction III-a			
		eive a score. If , seek a second				e result of which

Section B is on page R-8 and Section III-a is on page R-9

Sectio	on B				
B1	communities impacts occu	r be clearly defined as n invaded sites where	North Yes No	Central Yes No	South Yes No
	If Yes	Attach such a site definition inc to Question B2	cluding docum	nentation of evid	ence and Go
	If No	Go to Section III-a			
B2		m distance of propagule/ sal be estimated?	North Yes No	Central Yes No	South Yes No
	If Yes	Attach a definition of that distant evidence, complete Sections III Potential for Expansion, Manag Enter a conclusion of No unless Section D for details on how to use for the species.	I, IV, and V to gement Difficu s limited use a	derive informat ulty and Comme opproved on page	ion on rcial Value. e R-17. Go to
	If No	Go to Section III-a			
		Section III-a is o	on page R-9 a	and Section D is	on page R-19

Check box if site definition is attached

Check box if definition of distance of dispersal is attached

	s where Plant Has II	nvaded (Strike	out un-invaded	zones)
III-a Known Rate of Invas	ion.			
1. Was this species rep two new discrete po month period within	pulations in any 12	North Yes No	Central Yes No	South Yes No
If Yes	Indicate <b>P</b> = <b>High</b> , records and list the	0 0	-	
If No or Unknown	Indicate $\mathbf{P} = \mathbf{Low}$ a	nd Go to Sectio	n IV	
		North	Central	South
	P=	=		
Copy	v these Potential value	s to page R-14;	Section IV is on	page R-12
If yes, then <i>list relevant ne</i>	w sites invaded for eac	h zone:		
North:	,			
ΙΝΟΓΙΠ.				
Control				
Central:				
Central: South:				

	ONLY Fo	or Zones Where Plant Has NO	T Invaded. <i>(St</i>	rike out invadea	l zones)
III-b	Potential for	r Invading Non-invaded Zones			
1.		s species be able to survive, and disperse in the <u>climate</u> e?	North Yes No	Central Yes No	South Yes No
	If Yes If No	<i>Provide documented eviden</i> Indicate <b>P</b> = <b>Low</b> below and		1	I-b 2
2.		-types suitable for the growth cies occur in this zone?	North Yes No	Central Yes No	South Yes No
	If Yes	Provide documented evide invaded zone is equal to th Section III-a - if there is a Low, use High). If an <u>adjacent zone</u> i If the only <u>adjacent zone</u> i	e <b>P</b> assigned to n option betwee s invaded <b>Go to</b>	the <u>nearest inva</u> en two zones wi Section III-c	$\frac{\text{ded zone}}{\text{ith } \mathbf{P}} = \text{High or}$
	If No	Indicate $\mathbf{P} = \mathbf{Low}$ below and			
			North	Central	South
		P =	Copy these <b>P</b>	otential categori	ies to page R-14
If yes	s, then <i>provid</i>	e evidence that suitable climate	and habitat-type	es for survival a	nd impacts exist
in zoi	ne(s): Zone =	::			

Section III-c is on Page R-11 and Section IV is on page R-12

\*\*\*\*\*\*

ä

\*\*\*\*\*

## ONLY For Zones Where Plant Has NOT Invaded But Has The Potential To Invade.

## III-c Potential for Causing Ecological Impacts in Non-invaded Zones

1. For zones invaded by this species, identify all communities in which any ecological impacts identified in Section II-a occur. Do these communities occur in the un-invaded zone under consideration (e.g., do the negatively impacted Federal- or Florida-listed Endangered or Threatened species or Species of Special Concern occur in this zone)? If no impacts were documented in any zones for this species, the response here is **NO**.

North		Cen	tral	South		
Yes	No	Yes	No	Yes	No	

If Yes *Provide documented evidence below* and revise the **Ecological Impact Score** for this zone from zero to match the **Ecological Impact Score** for the <u>adjacent invaded zone</u> (use highest value if there is an option; mark this revised score with brackets{} to show this score was derived from Section III-c) then **Go to Section IV** 

## If No Go to Section IV

If yes, provide evidence that communities where ecological impacts occur exist in non-invaded *zone(s)*: Zone = \_\_\_\_\_:

Section IV is on page R-12

# IV Factors That Increase the Difficulty of Management

If scores are assigned, attach Management Worksheets that include citations and/or log of expert evidence.

Add up all points from statements that are true for this species and documentation of evidence must be provided. Assign 0.5 point for each statement for which a true/false response is not known.

	Points	All Zones
i) No known permitted control techniques.	15	
<ul> <li>ii) Difficult to control without damage to native species in:</li> <li>≥ 50% of discrete sites;</li> <li>25% to 50% of discrete sites.</li> </ul>	10 7	
iii) Total costs of control per acre in <b>first year</b> are > \$1,500/acre	5	
iv) Further site restoration is necessary following plant death.	5	
v) Total area to be managed:≥ 500 acres; < 500 but > 50 acres.	5 2	
<ul><li>vi) Re-treatments following the first year of control expected: at least once a year for the next 5 years; 1 to 4 times over the next 5 years OR regrowth not known.</li></ul>	5 2	
vii) Access to most areas is difficult.	3	
viii) Occurs in more than 20 discrete populations.	3	
ix) Many persistent or dispersed propagules per plant	3	
x) Early reproduction.	2	
Т	<b>fotal for M</b>	=
Copy these Management scores to page R-1 then Go to	Section V a	on page R-13

Check box if Management Worksheet is attached

V	<u>Economi</u>	<u>c Value</u>
1.	Does this	s species have any economic value in Florida?
	Yes	Go to question V - 2
	🗌 No	Indicate $V = No$ on page R-1, but treat as Low in the Conclusions table on page R-16. Go to Conversion of Index Scores to Index Categories.
2.		ecies sold in national or regional retail stores? (E.g., WalMart, Home Depot, permarkets.)
	Yes	<b>Go to Conversion of Index Scores to Index Categories</b> on page R-14 and indicate V = High
	🗌 No	Go to question V - 3.
3.	State-wid	le are there more than 10 commercial growers of this species?
	Yes	<b>Go to Conversion of Index Scores to Index Categories</b> on page R-14 and indicate V = High
	No No	Go to question V - 4.
4.	Does this purposes	s species have economic value for forage, biomass, or remediation ?
	Yes	If net value $\ge$ \$50,000 / yr, <b>Go to Conversion of Index Scores to Index</b> <b>Categories</b> (page R-14) and indicate V = High
	🗌 No	If net value < \$50,000 / yr, <b>Go to Conversion of Index Scores to Index</b> <b>Categories</b> (page R-14) and indicate V = Low
		Conversion of Index Scores to Index Categories is on page R-14

# **Conversion of Index Scores to Index Categories**

Using the following table, determine the appropriate category (Low to High or Very High) for each index. (Categories for Potential for Expansion Index and Commercial Value were copied from Pages R-9, R-10, and R-13)

<u>Category</u>			Impact:	<u>s</u>	Ma	-	t Difficulty	
Low	(L)		< 12			< 15		
Medium	(M)	)	12 - 26					
High	(H)	)	26.5 - 4	41		≥15		
Very High	(VI	H)	>41					
	<u>I</u> North	<u>mpact</u> Central	South	North	Potential Central	South	Management All zones	<u>Value</u> All zones
Category								

### **Conclusion**

### For Zones where conclusions were NOT developed in Section D

Conclusions are derived separately for each zone from the combined index categories using the table on page R-14. Whenever new information becomes available about the invasive status of a species (e.g., new populations, new data on ecological impacts) that species should be reviewed and if necessary reassessed. The following text corresponds to the abbreviations in the table on page R-14 (text in bold is approved language for IFAS documents, text in parentheses provides additional instructions to IFAS faculty and for reassessment):

#### OK =

Not considered a problem species at this time (may be recommended by IFAS faculty and reassess in 10 years).

#### Caution =

**Caution - manage to prevent escape** (may be recommended by IFAS faculty and reassess in 2 years).

*No - unless limited use approved =* 

Go to Section D for details on how to make a proposal for specified and limited use for the species.

If a proposal for specified and limited use has not been approved by the IFAS Invasive Plant Working Group (IPWG) the conclusion is:

**Invasive and not recommended by IFAS faculty** (reassess in 10 years - a proposal for specified and limited use may be submitted to the IPWG at any time). In IFAS publications, reference can be made to the Web site for the Center for Aquatic and Invasive Plants (<u>http://plants.ifas.ufl.edu/assessment</u>) to determine if any specified and limited uses have been approved since the time of publication.

If a proposal for specified and limited use has been approved by the IPWG the conclusion is:

Invasive and not recommended by IFAS faculty except for "the specified and limited" use that has been approved by the IFAS Invasive Plants Working Group (reassess in 2 years).

#### OR

**Predicted to be invasive\*: Recommended only under specific management practices agreed upon by the IFAS Invasive Plant Working Group** (reassess in 2 years).

In IFAS publications the term "specified and limited" would be replaced by a summary of the specific use that has been approved (e.g., indoor foliage). Details of approved specified and limited uses are to be kept with other assessment documentation.

No =

Invasive and not recommended by IFAS faculty (reassess in 10 years).

\*Reported invasiveness in environments similar to but outside of Florida is one basis for this conclusion

## Determine Index Categories for ALL zones before starting this Section.

For each zone identify the combination of Index categories from page R-14 in the table below. The asterisk indicates the appropriate Conclusion. Footnotes and space for recording the Conclusions are provided on page R-17.

### **Index Categories**

**Conclusions** 

L/H = either Low or High

\*\*\*\*\*\*

See page R-15 for full text for conclusions

88	ential Manage.	Value		limited use approved		
VH L/	/H L/H	L/H	*			
H H H H H H H H H I H I H I H I	H H H H H L H L L H L H L L L L	L H L H L H L H	* * * *	* <sup>1</sup> * <sup>1</sup> * <sup>1</sup>		
M H M H M H M H M I M I M I M I M I	H H H L H L L H L H L L L L	L H L H L H L H	* *	*1 *1 *1 *1 *1		
Impact         Pote           VH         L/           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           H         H           M         H           M         H           M         H           M         H           M         H           M         H           M         H           M         H           M         H           M         H           M         H           L         H           L         H           L <td< th=""><th>H H H L H L L L/H</th><th>L H L H L/H</th><th></th><th></th><th>*<sup>2</sup> *<sup>2</sup> *<sup>2</sup></th><th><b>*</b>2,3</th></td<>	H H H L H L L L/H	L H L H L/H			* <sup>2</sup> * <sup>2</sup> * <sup>2</sup>	<b>*</b> 2,3

Footnotes for table of Conclusions

<sup>1</sup> Enter a conclusion of **No unless limited use approved** in the spaces below. **Go to Section D** on page R-19 for details on how to make a proposal for specified and limited use for the species.

<sup>2</sup> If a zone is invaded and has Impact = Low or Medium but the <u>adjacent zone</u> has Impact = High or Very High or has received a **No** or **No unless limited use approved** conclusion via Section C, then for the invaded zone under consideration **Go To Section** C.

<sup>3</sup> For zones where a species has <u>not</u> invaded, if Potential = Low but Impacts in an <u>adjacent</u> <u>invaded</u> zone are Medium, High, or Very High, then use **Caution** for the un-invaded zone. If Impact = Low in the adjacent zone or it is not yet invaded, then retain **OK**.

Because the Conclusion for one zone can be modified by the Index Categories or Conclusions for an adjacent zone, be sure to check Conclusions for each zone twice.

Conclusions North \_\_\_\_\_

Central

South \_\_\_\_\_

Copy these Conclusions to page R-1; Section C is on page R-18; Section D is on page R-19.

Secti	ion C			
C1	Was the first record of this species in natural areas of this zone less than 10 years ago if herbaceous or less than 20 years ago if woody?			
	Yes	<i>Highlight distribution records that show first documentation in Florida is less than 10 or 20 years ago</i> then <b>Go to question C2</b>		
	No	Conclusion for this zone remains as <b>Caution - manage to prevent escape</b> OR <b>Not considered a problem species at this time</b> .		
C2	Can this s	pecies reproduce and disperse in this zone?		
	☐ Yes	The conclusion for this zone is <b>Invasive and not recommended by IFAS</b> <b>faculty</b> OR <b>Invasive and not recommended by IFAS faculty except for</b> <b>the specified and limited use that has been approved by the IFAS</b> <b>Invasive Plants Working Group</b> to match the adjacent, highly impacted zone. However, do not alter the <b>Ecological Impact</b> category for this zone from Low or Medium. (Thus, if there is an adjacent non-invaded zone, the <b>Ecological Impact</b> category for that zone will remain Low or Medium.) The assessment for this zone can be considered complete now, even if the "documentation of evidence" requirement for <b>Ecological Impacts</b> is not fulfilled (i.e., there are only one or two expert opinions on this species in this zone).		
	🗌 No	Conclusion for this zone remains as <b>Caution - manage to prevent escape</b> OR <b>Not considered a problem species at this time</b>		
		Select appropriate Conclusion and enter it on Page R-1 and R-16		
If ye	s, then <i>provi</i>	de evidence of reproduction and dispersal in this zone: Zone =		

# Section D

If there are specific circumstances in which this species could be used that would not be expected to result in escape and invasion (e.g., foliage plants that are only used indoors and which can be reasonably prevented, by conspicuous labeling, from use or disposal in the landscape) **OR** if it is possible to define how to avoid dispersal of this species to habitats where its impacts are high (i.e., from Section B), then based on a proposal that is approved by the IPWG the conclusion becomes **Invasive and not recommended by IFAS faculty except for "the specified and limited" use that has been approved by the IFAS Invasive Plants Working Group**. The proposal for specified and limited use should document how invasion would be prevented, and should stipulate that disposal of any propagules must ensure their destruction. Reassess this species in 2 years (or in the case of referrals from Section B, immediately if the incidence of worst-case impacts increases above 10%.)

In IFAS publications the term "the specified and limited" would be replaced by a summary of the specific use that has been approved (e.g., indoor foliage).

Conditions of Acceptable Specified and Limited Use:

**Further information needed:** 

2222

0000