

DEPARTMENT OF  
B · O · T · A · N · Y



PLANT · PATHOLOGY

PURDUE UNIVERSITY • WEST LAFAYETTE IN

## Weed Management

## Purdue Extension



# Guidelines for Submitting Digital Plant Images for Identification: Grass Identification

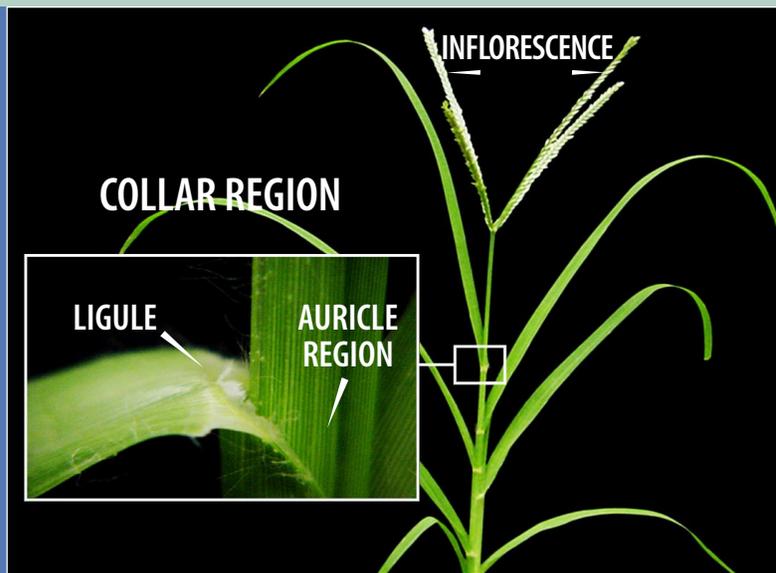
**Dr. Case R. Medlin**

*Assistant Professor of Weed Science  
Purdue University*

The accuracy of identifying a plant from digital images is dependent on the information captured in the images. The better the image, the better the diagnosis. Certain plant features are necessary for species identification. It may be beneficial to have an image of the entire plant, but it is unlikely for a plant to be positively identified from a single image. Consider submitting multiple images, each one focused

on a particular morphological feature. In the columns below are illustrations of important plant features for four grass plants. Note the level of detail needed for each morphological feature. All outlined features do not apply to every plant, while some plants may have other features to consider. When in doubt, take the extra image; it may be the key to correct identification of the plant.

### ILLUSTRATION OF THE VARIOUS PLANT PARTS USED THROUGHOUT THIS DOCUMENT.



**Entire plant. To give the diagnostician a general overview of the plant.**

**JOHNSONGRASS**



**SHATTERCANE**



**GIANT FOXTAIL**



**YELLOW FOXTAIL**



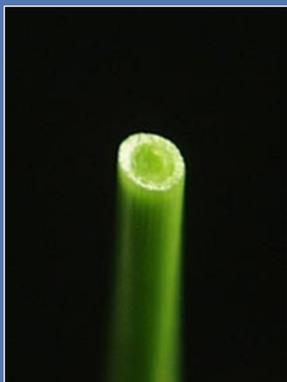
**Stem shape.**

**Round**



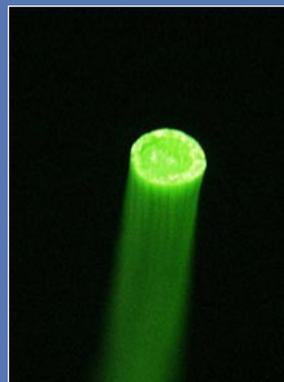
**JOHNSONGRASS**

**Round**



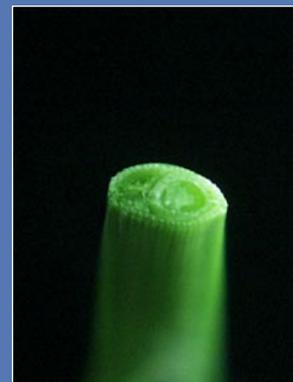
**SHATTERCANE**

**Round**



**GIANT FOXTAIL**

**Flattened**



**YELLOW FOXTAIL**

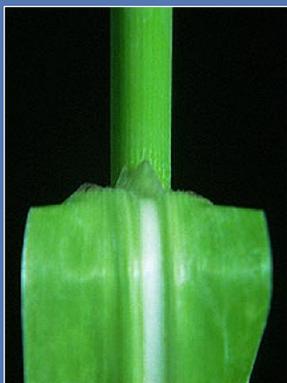
**Leaf ligule. The thin tissue at the collar region between the blade and the stem.**

**Membranous**



**JOHNSONGRASS**

**Membranous**



**SHATTERCANE**

**Membrane tipped  
with hairs**



**GIANT FOXTAIL**

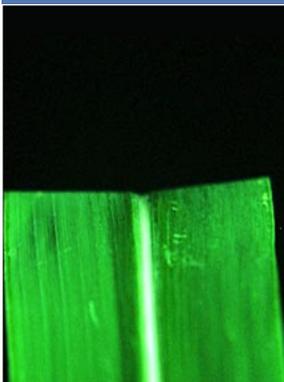
**Membrane tipped  
with hairs**



**YELLOW FOXTAIL**

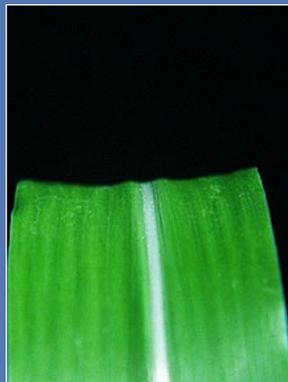
### Hairs on leaf blade, leaf margin, or stem sheath.

No hairs present



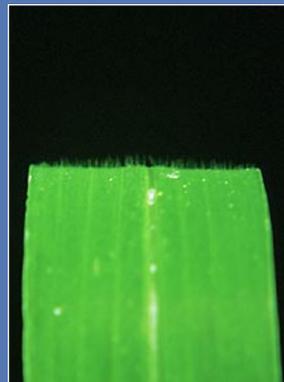
JOHNSONGRASS

No hairs present



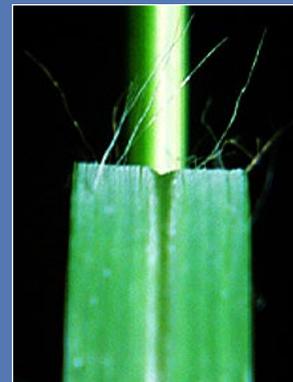
SHATTERCANE

Short hairs on leaf blade



GIANT FOXTAIL

Long hairs near collar



YELLOW FOXTAIL

### Root system.

Perennial rhizomes



JOHNSONGRASS

Simple – fibrous



SHATTERCANE

Simple – fibrous



GIANT FOXTAIL

Simple – fibrous



YELLOW FOXTAIL

### Inflorescence.

Open panicle



JOHNSONGRASS

Open panicle



SHATTERCANE

Compact panicle



GIANT FOXTAIL

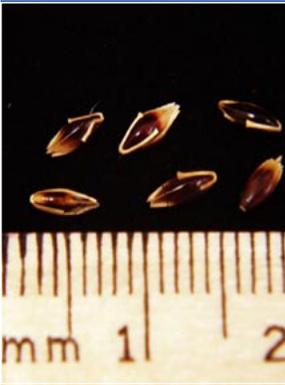
Compact panicle



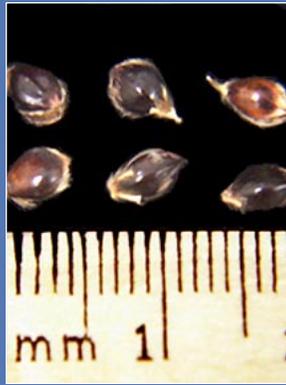
YELLOW FOXTAIL

**Attached seed. Seedling grasses should still have the seed attached to a root below the soil surface. Even genetically similar species have distinct seed characteristics.**

**JOHNSONGRASS**



**SHATTERCANE**



**GIANT FOXTAIL**



**YELLOW FOXTAIL**

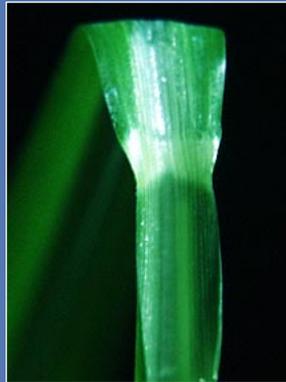


### Special characteristics of some species.

**Auricles present on Quackgrass**



**Absent ligule on Barnyardgrass**



**Perennial stolon of Bermudagrass**



**Triangular stem of Yellow Nutsedge**



NEW 6/01

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