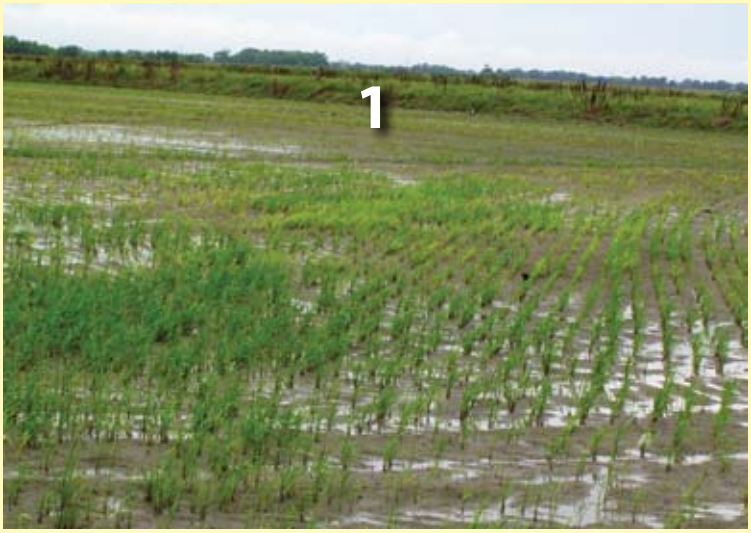
Identifying Herbicide Drift in Rice

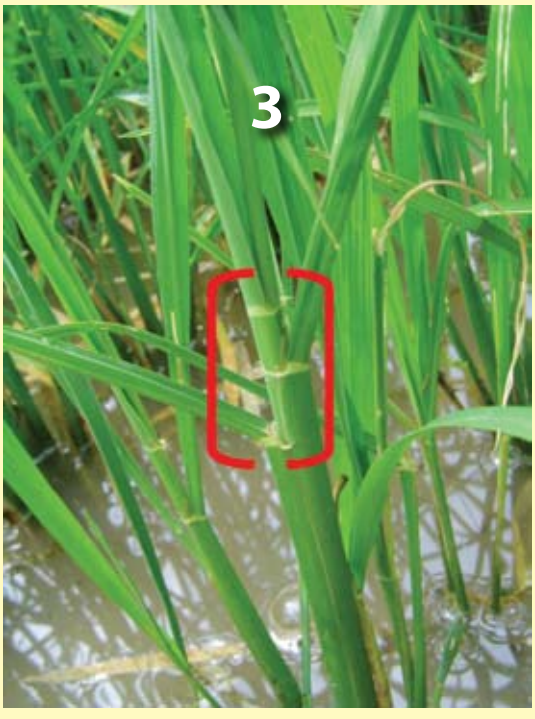
Herbicide drift symptoms may appear as irregular patterns through a field **(1)**, uniformly across the entire field or on just one side of a field.

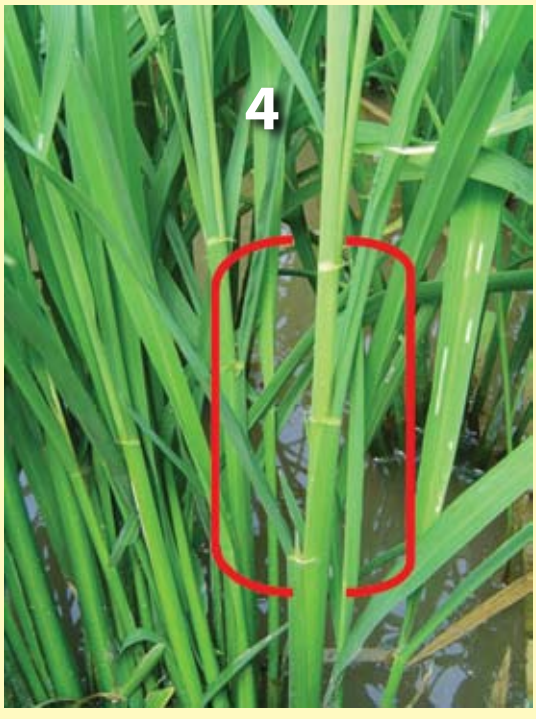
Symptoms may be as obvious as dead or dying plants or as subtle as shortened plant internode length.

This publication should assist rice growers and consultants with identifying rice affected by drift from four herbicides that have the potential to injure rice – Roundup, Newpath, Beyond and Ignite.



Plants on one side of a levee may be dead or dying while plants on the other side are alive because of being blocked from the wind **(2)**.





Shortened plant internode **(3 and 4)** is common with Roundup, Newpath, Beyond and Ignite drift.

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Symptoms of Drift from Roundup
(various glyphosate formulations)

Drift Occurring During Vegetative Growth

- Immediate cessation of growth
- Tightly rolled new leaf **(5)**
- General yellowing of new leaf; leaf tip burn or death occurring in older leaves first **(5)**
- Reddening of plant base

Drift Occurring During Reproductive Growth

- Immediate cessation of growth
- Secondary heading at upper nodes **(6)**
- Malformed panicle and flag leaf – flag leaf often shortened; often rate dependent **(7)**
- Malformed seed – "parrot beaking" or blank, white seed hulls **(8)**
- Failure of panicle to fully emerge from leaf sheath

Symptoms of Drift from Newpath/Beyond
(imazethapyr/imazamox)

Drift Occurring During Vegetative Growth

- Immediate cessation of growth
- Slight to tightly rolled new leaf **(9)**
- Interveinal yellowing or leaf death occurring in new leaves first **(9 and 11)**
- Leaf lesions similar to blast disease **(10)**
- Excessive tillering along a single plane causing a "flat-fan" appearance

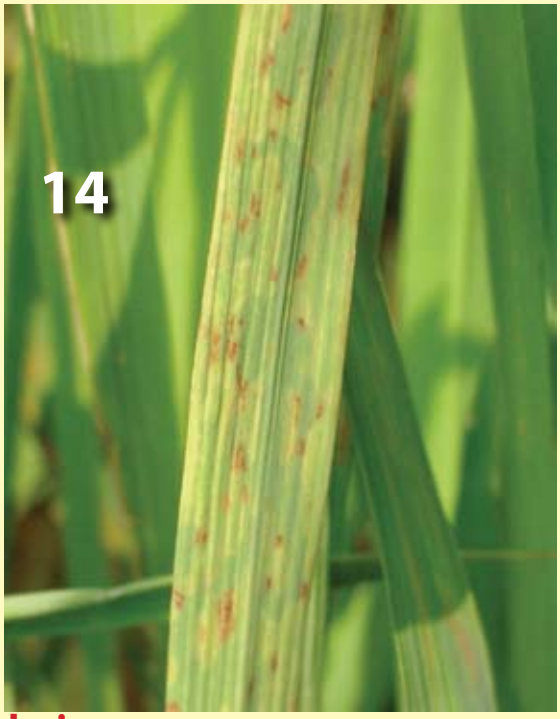
Drift Occurring During Reproductive Growth

- Immediate cessation of growth
- Secondary heading at upper nodes **(12)**
- Malformed panicle and flag leaf
- Malformed seed – "parrot beaking"
- Failure of panicle to emerge from leaf sheath; grain may mature in leaf sheath or rot and cause death of flag leaf **(13)**; often rate dependent

Symptoms of Drift from Ignite
(glufosinate)

Drift Occurring During Vegetative or Reproductive Growth

- Yellowing of leaves contacted by herbicide
- Speckling of leaf where herbicide contacted leaf **(14)**
- Water-soaked lesions appear on affected leaves **(14)**
- Older leaves die, but emerging leaves express no symptoms **(15)**



More Information/Conclusion

Identifying herbicide drift in rice cannot be accomplished by examining a single plant. Evaluate the symptoms of several rice plants and the pattern of damage in the field. Also inspect areas adjacent to the field, including hedgerows, ditch banks, trees and vines, as well as weeds in and around the field.

Caution should be used when applying herbicides near susceptible crops. Herbicide applications should be made with properly calibrated equipment using drift-reducing nozzles. Applications should not be made during high winds or during early morning or late evening when the potential for temperature inversions is greatest.

Eric Webster, Professor, School of Plant, Environmental and Soil Sciences
Justin Hensley, Postdoctoral Researcher, School of Plant, Environmental and Soil Sciences
Bruce Schultz, Assistant Communications Specialist, LSU AgCenter Communications

www.LSUAgCenter.com
Louisiana State University Agricultural Center
William B. Richardson, Chancellor
Louisiana Agricultural Experiment Station
David J. Boethel, Vice Chancellor and Director
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Paul D. Coreil, Vice Chancellor and Director
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