

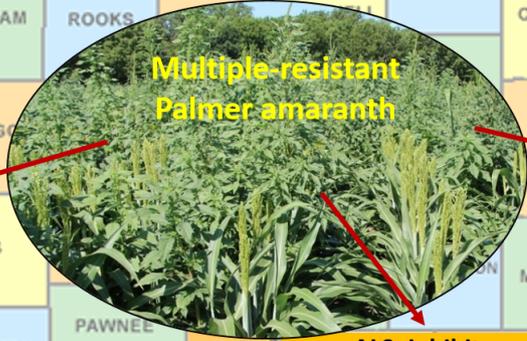
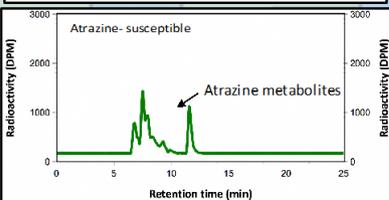
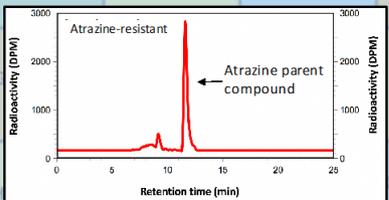
WEED SCIENCE

PS II-inhibitors resistance (Atrazine)

No mutation in *psbA* gene



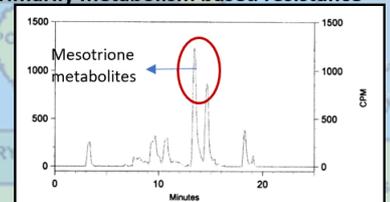
GST – metabolism of atrazine



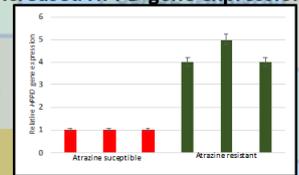
Multiple-resistant Palmer amaranth

HPPD-inhibitors resistance (Mesotrione)

Primarily metabolism based resistance

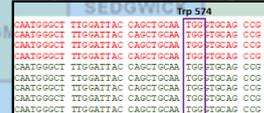


Increased HPPD gene expression



ALS-inhibitors resistance (Chlorsulfuron)

70% of the resistant plants did not show any mutation in ALS gene



30% of the resistant plants confirmed target site resistance to chlorsulfuron

WEED SCIENCE

Published six times a year by the Weed Science Society of America

William K. Vencill, *Editor*

The Weed Science Society of America publishes original research and scholarship in the form of peer-reviewed articles in three international journals. *Weed Science* is focused on understanding “why” phenomena occur in agricultural crops. As such, it focuses on fundamental research directly related to all aspects of weed science in agricultural systems. *Weed Technology* focuses on understanding “how” weeds are managed. As such, it is focused on more applied aspects concerning the management of weeds in agricultural systems. *Invasive Plant Science and Management* is a broad-based journal that focuses not only on fundamental and applied research on invasive plant biology, ecology, management, and restoration of invaded non-crop areas, but also on the many other aspects relevant to invasive species, including educational activities, policy issues, and case study reports. Topics for *Weed Science* include the biology and ecology of weeds in agricultural, forestry, aquatic, turf, recreational, rights-of-ways, and other settings; genetics of weeds and herbicide resistance; chemistry, biochemistry, physiology and molecular action of herbicides and plant growth regulators used to manage undesirable vegetation, and herbicide resistance; ecology of cropping and non-cropping systems as it relates to weed management; biological and ecological aspects of weed control tools including biological agents, herbicide resistant crops, etc.; effects of weed management on soil, air, and water. Symposia papers and reviews are accepted. Consult the editor for additional information.

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On the Cover:

Predominance of metabolism-based resistance to PS II-, ALS- and HPPD-inhibitors in a multiple-resistant *Amaranthus palmeri* evolved in Stafford County, Kansas, USA. Vijay Nandula

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