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Know Your Community: Weedy and Invasive Species

by Sharon Clay

Weeds are the most important pest problem in agronomic and non-crop systems, including water bodies. Dollar losses associated with weedy and invasive plant species in the U.S. alone are in the billions. Weeds are threatening many ecosystems and becoming more important in many state and federal programs. In developed countries, infestations result in decreased yields, often harbor deleterious insects and diseases, and increase commodity costs due to management and control. In many developing countries, weeds have the increased potential to become the major threat to agricultural cropping systems because of the lack of labor for manual weeding. Therefore, the importance of this community will potentially increase in future as these countries seek economic alternatives to sustain their food production systems. Further, elements of climate change may also increase the prevalence of new and invasive weeds and also enhance the competitive ability of existing weeds in both agricultural and non-agricultural ecosystems. These potential scenarios pose interesting challenges and opportunities to our community.

Our Focus

We are interested in understanding the ecology of weedy and invasive plants in managed ecosystems and in the development of sustainable approaches to manage them. In particular, community members are interested in the basic principles of integrated weed management (IWM), including cultural, biological, chemical, and mechanical techniques. The community focuses on IWM using an adaptive management framework in support of related interests, such as plant identification, spatiotemporal weed distribution patterns, new technology (e.g., biotech, geospatial tools, remote sensing), herbicide resistance, and weed competition. Member interests also include regulatory issues associated with weed management and opportunities for restoration of native communities.

Our Members

Our community has seen a steep increase in membership over the years. The community has grown to 405 members, of whom 88% are from the USA and 12% from other parts of the world representing 27 countries. Membership includes representation from academia, governmental and non-governmental agencies, private industry, international research centers, freelance consultants, and retired personnel.



Palmer amaranth. *Courtesy of the Delaware Department of Agriculture.*

Our Activities

The community had both an oral and poster session at the 2013 International Annual Meeting in Tampa, FL. At the 2014 meeting in Long Beach, CA, the community will be hosting a half-day symposium on “The Use of Gene Flow Information in Environmental Risk Assessment of Biotechnology-derived Crops” on Tuesday, 4 November. The symposium will include talks and posters from renowned global experts on topics related to environmental risk assessment for biotechnology-derived crops including gene flow to weedy and invasive species, gene flow from biotechnology-derived insect-protected soybean to a cross-compatible relative, the utility of demographic/lifecycle modeling as a predictive tool in assessing the potential consequences of gene flow from a biotechnology-derived crop to one of its relatives, and biology and ecology of cultivated and wild soybean, and hybrids between them.

In addition to the symposium, volunteered oral and poster presentations on this topic and others will be presented. The community business meeting will be in the afternoon prior to the oral and poster session on Tuesday. We are looking forward to seeing old friends and new members (and those of you who just want to check us out) in Long Beach!

For more information on the symposium, please contact me (community chair and organizer of the symposium) at Sharon.clay@sdsu.edu. Input for future activities are welcome and can be sent to Dr. Anil Shrestha, community vice-chair, at ashrestha@csufresno.edu. To add the Weedy and Invasive Species Community to your ASA membership, log in and check the box at: www.agronomy.org/account/communities/asa.

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