News Column

Stacy Campbell K-State Research & Extension, Hays February 3, 2020

Integrated Weed Control Management of Herbicide Resistant Weeds – Feb. 19th

Weed control in agriculture production has become more challenging with more weeds developing herbicide resistance to some herbicides. This is actually nothing new, the first documented herbicide resistant weed in Kansas was in 1976. It was kochia resistant to atrazine and again some kochia plants developed resistance to another herbicide, Glean in 1987.

How does resistance occur? Resistance is the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. Resistant biotypes are genetically different from susceptible biotypes.

Resistant plants were already found, very infrequently, in the weed population before a herbicide was ever used. Think of it this way—there might be a few million weed seeds of a particular species in, say a 40-acre field. The overwhelming majority of plants from those seeds are controlled by a given herbicide. A slim handful are in every way the exact same except for one small genetic difference. That small genetic difference allows the weeds from those seeds to overcome the effects of that herbicide as they germinate.

After several years of using the same herbicide, or herbicides from the same group, that very infrequently occurring version of the weed—a version that looks exactly like the type that was controlled by the herbicide—is allowed to reproduce. At first it might look like an escape, or a small patch of weeds that survive. Eventually, it becomes the dominant type of that weed in the field. It's "survival of the fittest" in fast forward.

In an effort to equip agriculture producers best on how to combat these herbicide resistant weeds. An **"Integrated Weed Control Management of Herbicide Resistant Weeds"** program will be held on Wednesday, February 19th. Registration at 8:30 a.m. the program starts at 9:00 concludes at 11:30 a.m. followed by a complimentary noon meal. It will be held at American Ag Credit, 5634 10th Street in Great Bend.

Presenters will be Sarah Lancaster and Vipan Kumar, K-State Research & Extension weed control specialists.

Continuing education units for CCA & Commercial Applicators are available.

RSVP is requested for the meal count by Monday, February 17th call Brenda at the Cottonwood Extension Office 620-793-1910 or email <u>bwalton@ksu.edu</u>

Another program that folks might be interested in will occur on March 11th. **"Thriving to Surviving:** Succession Planning in Rural Kansas". Planning for the future is vital and families must take steps to ensure assets for the next generation. K-State Research & Extension & Fort Hays State University – Small Business Development Center are having a "Thriving Across Generations: Succession Planning in Rural Kansas" program on Wednesday, March 11th from 5:30 to 9:00 p.m. at the Fort Hays State University Memorial Union, 700 College Drive.

The featured speaker for this event is Rick Feltenberger, Regional Director at the FHSU Kansas Small Business Development Center. Participants will also choose one of three breakout sessions. Farm succession planning will be led by Roger McEowen, Professor of Agricultural Law and Taxation. Tom Byler with both Emporia State University and Washburn University SBDCs will discuss Small Business Succession. Fort Hays State University's Tony Gabel will speak about estate plans for your family.

The \$20 registration fee per person will include a meal and an estate planning notebook. Register online <u>https://www.northwest.k-state.edu/events/thriving_across_generations/index.html</u> early registration due by March 9, 2020. Registration of \$30 will be accepted at the door, includes meal and materials.

If you have questions call Cottonwood District Extension Office at 785-628-9430.

Stacy Campbell is an Agriculture and Natural Resources agent in the Cottonwood District. You can contact him by e-mail at scampbel@ksu.edu or calling 785-628-9430.