To: Local News

From: Keith P. VanSkike

Agronomy, Natural Resources, District Agent

Twin Creeks Extension District

Kochia Control

Now is the time to finalize plans for kochia control. Major flushes of kochia emerge in late February and continue through early April, resulting in dense populations that make adequate herbicide coverage difficult. In addition, glyphosate-resistant kochia is prevalent across western Kansas, making kochia control even more challenging. For these reasons, it is important to apply pre-emergence herbicides in fall or early spring to control this weed before it emerges.

The choice of herbicides for effective pre-emergence control of kochia in February and early March will vary depending on subsequent cropping intentions. Each herbicide program needs two components. First, a very soluble and effective herbicide that can be incorporated with very little precipitation, such as dicamba. Second, an herbicide that has longer residual activity, which will require perhaps 0.75 inches or more precipitation for adequate incorporation, such as atrazine. Precipitation events during late winter are often too small to activate longer residual herbicides, but dicamba may control kochia for 4 to 6 weeks until the longer residual herbicide is incorporated. The best timing for this application is January through the first week of March but **prior** to kochia emergence, which can vary depending on weather conditions. Later applications, for example, at the time of burndown, are more likely to occur after kochia emergence, which increases the risk of control failure. Fall-applied treatments can help ensure timely application. Resistance to key post-emergence herbicides coupled with early emergence makes herbicide timing critical for kochia management. Pre-emergence herbicides should be applied in fall or very early spring.

In Kansas, kochia generally emerges in March, but can emerge as early as late January. Kochia can produce more than 50,000 seeds per plant, which are spread when the matured plant breaks off at the soil surface and tumbles in the wind (Figure 3). Kochia seeds are viable in the soil seedbank for only 1 to 2 years. If uncontrolled, kochia can reduce soybean yield by 30%, corn and sorghum yield by about 40%, and wheat yield by 58%. Kochia populations in Kansas have confirmed resistance to: chlorsulforon (Group 2), dicamba and fluroxypyr (Group 4), atrazine (Group 5), and glyphosate (Group 9).

For more details ask for publication “2020 Chemical Weed Control SRP1159” on Twin Creeks District website at www.twincreeks.k-state.edu. Or stop in at your local Twin Creeks Extension office and pick up a copy.