

## News Column

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### **Late-winter preplant applications for kochia control**

Major flushes of kochia emerge in late February to early March and into April. If allowed to emerge, postemergence herbicide applications often will not provide adequate control. Incomplete control of these dense populations is likely in these situations. When the kochia is glyphosate-resistant and complete herbicide coverage is not possible, results can be very poor when trying to use postemergence products to control dense populations. The dense populations may also be stressed, which reduces the effectiveness of postemergence herbicide applications.

The choice of herbicides for effective preemergence control of kochia in February and early March will vary depending on subsequent cropping intentions. Various cropping scenarios are discussed below.

#### **Components of the herbicide program to effectively manage kochia at germination.**

Each herbicide program needs to consist of two components. First, a very soluble and effective herbicide that can be incorporated with very little precipitation, i.e. dicamba. Second, an herbicide that has longer residual and requires perhaps 0.75 inches or more precipitation for adequate incorporation. During January or February, precipitation events often are on the light side with heavier precipitation events more common in the spring months. Dicamba may persist for 4 to 6 weeks and the longer residual herbicide will resume controlling kochia once incorporated and perhaps if dicamba residual runs out. Included below are herbicides by crop that have longer residual control.

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. The later into the season, the more likely it is there will be some small, emerged kochia, which increases the risk of control failure. If producers wait until later to apply the burndown and preemergence herbicide in the same application, the kochia will be larger and most likely will not be controlled.

#### ***Fields going to sorghum or corn***

A combination of glyphosate (using a minimum of 0.75 lb ae per acre) with herbicides that have PRE and POST activity on kochia is most valuable. Tank mixing 8 to 16 oz of dicamba with 1 to 2 pints of atrazine will control existing broadleaf and grass weeds, and will provide extended preemergence control of kochia often into May. An application of Clarity alone suggests that a pint provides better control than 8 oz. However, a combination of atrazine and Clarity is better than Clarity alone.

### ***Fields going to corn only***

Dicamba plus Corvus or Balance Flexx are good residual herbicides but should be mixed with a little atrazine. December applications have also been effective in managing kochia. Corvus+atrazine, Scoparia+atrazine, and Atrazine+Clarity were among the best treatments in the field trials at Tribune. Scoparia contains Isoxaflutole as does Corvus and Balance Flexx, however is not labeled ahead of corn planting. The 24c Special local need label for use of Scoparia to control kochia in fallow or ecofallow has a 4-month plant-back restriction to corn and a 6-month plant-back restriction to sorghum. Treatments containing Sencor (metribuzin) or Zidua which both have activity on kochia and can be applied in December through February ahead of planting corn.

### ***Fallow fields going to fall-planted wheat***

Atrazine should not be used in this situation. Metribuzin (Sencor and multiple generics) is a triazine and can substituted for atrazine and has a 4-month plant-back restriction to wheat. Additional products include Scoparia, Authority MTZ, and other products containing sulfentrazone. Zidua also has good activity but requires significant rainfall thus applying Zidua with dicamba is critical.

### ***Fields going to wheat this fall***

If kochia is emerging in row crop stubble intended to be planted to wheat this fall, herbicide options exist that provide residual kochia control. Atrazine cannot be used in this situation, as this treatment is off-label. The following herbicides could provide effective residual control of kochia for fields to be planted to wheat this fall: dicamba, metribuzin (Dimetric label indicates  $\frac{1}{2}$  to  $\frac{2}{3}$  of a pound), Corvus, Balance Flexx, Scoparia (equal to Balance Pro), and Lumax EZ. These products allow wheat to be planted 4 months following application.

These treatments can be effective when made prior to kochia emergence. A November application of one pound of atrazine was effective through June 12. However, this treatment is labeled only if corn or sorghum will be planted the following year. The November application of Corvus was not adequate. The addition of metribuzin to Corvus would have improved kochia control. HPPD inhibitors should always be applied with a triazine. Only metribuzin, which is a triazine, can be applied in the late fall or early spring when wheat will be planted in the fall. February and March applications of Corvus and metribuzin were very similar and effective. This suggests that if weather cooperates and a window for application is available in February, getting these early treatments applied at that time could be beneficial.

Information provided by Dallas Peterson, K-State Extension Weed Management Specialist.

