

COMMON DANDELION CONTROL WITH FALL AND SPRING BURNDOWN TREATMENTS.
Jerry D. Doll, Extension Weed Scientist, Department of Agronomy, University of Wisconsin, 1575
Linden Dr., Madison, WI 53706.

Wisconsin farmers often find spring burndown treatments provide less than desired dandelion control prior to no-till planting corn or soybean. Effective fall treatments would allow planting when conditions are right without waiting to first apply a spring burndown herbicide program. Trials with both fall and spring applied burndown herbicides were done for 3 years at the Arlington Agricultural Research Station. Fall applications were made on Nov. 2, 2001, Nov. 7, 2002 and Oct. 23, 2003. Spring treatments were applied on Apr. 29, 2002, May 6, 2003 and Apr. 27, 2004. The previous crop was corn in 2001/02 and 2002/03 and an old alfalfa field in 2003/04. Herbicides were applied with the recommended adjuvant(s) in 20 gal/a of water with a backpack CO₂ sprayer fitted with extended range flat fan nozzles. Dandelion control and abundance ratings were taken after application and up to fall harvest. Fall and spring burndown treatments included 0.48 lb ae/a of 2,4-D ester unless otherwise noted. Corn or soybean was no-till planted each spring and an appropriate annual weed herbicide program was used.

Fall applied treatments that consistently gave 90% or greater common dandelion control through June the next season included tribenuron (always at 2.66 gm ai/a unless otherwise noted) plus other sulfonylurea herbicides such as clorimuron, clorimuron + thifensulfuron (Synchrony) and rimsulfuron + thifensulfuron (Basis) and flumioxazin. 2,4-D ester alone and with glyphosate was less consistent in controlling common dandelion, probably because the modes of action of these herbicides are affected by the cooler temperatures of late October and early November in the upper midwest more than treatments based on sulfonylurea chemistries. In addition, applying herbicides in this chemical group provides an alternative mode of action to glyphosate in the burndown phase of no-till cropping systems.

To attempt an answer to the question of how late is too late for fall treatments, I applied tribenuron plus Synchrony on Dec. 5, 2003. The air and soil temperatures were 43 and 31 F, respectively, and dandelion plants had only a few green leaves near the center of the rosette leaves. The lowest temperature prior to Dec. 5 were 12 and 13 F on Nov. 8 and 9. Even under these conditions, common dandelion control in June 2004 was 98%, suggesting we have a wide window of opportunity for fall burndown programs based on sulfonylurea products.

Spring burndown treatments that gave 90% or more common dandelion control for at least 30 days after planting included Synchrony plus glyphosate or flumioxazin plus glyphosate. Spring-applied tribenuron with clorimuron or Synchrony gave excellent dandelion control but these are not legal treatments at this time due to the 45-day planting restriction for any crop following a tribenuron application. The use of fomesafen plus glyphosate without 2,4-D in the spring gave 100% dandelion control in 2003 and 83% in 2004 and does not have the planting delay of 7 days that results if 2,4-D ester is applied in the spring.

All trial sites at our Arlington Research Station had erect or prostrate knotweed and only treatments that included clorimuron or flumioxazin (either in the fall or spring) controlled this early germinating annual weed.