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Take note of waiting periods when planting barley after imidazolinone herbicide treatment

Although Clearfield® type systems are popular and effective, anyone considering producing barley should be aware of the time needed between treatment with imidazolinones and barley planting. Imidazolinones are herbicides such as Beyond®, Pursuit®, Raptor® and premixed formulations such as Extreme® that are used in production systems with resistant seed varieties. Used to control a wide spectrum of weeds (both grass and broadleaf) through inhibition of specific plant enzymes, imidazolinones are effective at low application rates and are environmentally friendly. Imidazolinone-tolerant varieties of corn, wheat, rice, canola, and sunflower have been developed through conventional breeding systems. However, barley varieties are not tolerant of imidazolinone herbicides.

Because rainfall drives deactivation of these herbicides, and much of the barley growing area in the U.S. is located in western regions of North Dakota, Montana, Wyoming and Idaho where dry conditions may persist, it is important to take note of the waiting period before planting barley in these locations. Beyond® lists an 18 month waiting period before planting non-resistant crops in Western environments where precipitation is less than 18 inches, or the soil pH is less than 6.2. The Beyond® label also indicates that plant injury may occur in areas receiving less than 10 inches of precipitation, in which case, a longer plantback interval would be needed.

Another concern involves the use of some pre-mixed herbicides that contain imidazolinones. One example is the herbicide Extreme® which is used in Roundup Ready® soybeans and contains Roundup® mixed with Pursuit®, which lists a 9 ½ to 18 month waiting period before planting barley.

All signs point to increased Clearfield® acreage in barley production areas with increasing research efforts at Dow, Syngenta and Limagrain to establish imidazolinone-tolerant wheat and canola varieties for the northern plains and Pacific Northwest regions of the U.S. Some research on resistant barley varieties is ongoing in Australia, with limited research in North America.