



Apply Clearfield lentil herbicides at the five to six node stages

CATEGORY [weeds](#) | November 27, 2018

The critical weed free period for lentil starts at the five-node stage and lasts until the 10-node stage. Research found that applying Clearfield herbicides to lentils at the five- to six-node stage provided the best weed control and highest yield.

Two research studies conducted at the University of Saskatchewan identified the optimum herbicide application timing in Clearfield lentil. The first study identified the critical period of weed control, which is when the crop needs to remain free of weeds in order to minimize yield loss. The research found that the critical period of weed control starts when weeds grow large enough to start competing with the crop, and lasts until lentil canopy closure. The critical period was found to start at the five-node stage and last until the 10-node stage of lentil.

The second research study compared weed control and yield between the conventional herbicide metribuzin (Sencor) and Clearfield lentil imi-herbicides. In lentil, metribuzin is applied early, up to the four-node stage, to avoid crop injury. However, this timing is earlier than the critical period of

weed control for lentil. In Clearfield lentil, herbicides can be applied later, from the one to nine node stages depending on the herbicide.

In the second study, herbicides were applied to Clearfield lentils at either the two- or six-node stage. The herbicides imazethapyr/imazamox (Odyssey NXT), imazamox (Solo), or metribuzin plus sethoxydim (Poast Ultra) sequentially applied five to seven days later were assessed for the best application timing to achieve optimum yield.

Metribuzin + sethoxydim had the highest broadleaf weed biomass regardless of application timing. The broadleaf weed biomass was 10 to 20 times greater compared to imazethapyr/imazamox and imazamox herbicides. This resulted in 31% lower average lentil yield than the other Clearfield herbicide treatments despite good grassy weed control delivered by sethoxydim.

Application of imazethapyr/imazamox or imazamox herbicides at the six-node stage provided a high level of control of both grassy and broadleaf weeds. Application of imazethapyr/imazamox or imazamox herbicides at the six-node stage produced 30% higher lentil yield than with early application of these herbicides at the two-node stage.

The research confirmed that Clearfield lentil herbicides imazethapyr/imazamox or imazamox should be applied at the five- to six-node stage of lentil to maximize yield and reduce weed competition. However, if herbicide application is delayed past this stage, herbicide application is still warranted to prevent further weed completion and lost yield.

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Fedoruk, L., Johnson, E., & Shirliffe, S. (2011). The Critical Period of Weed Control for Lentil in Western Canada. *Weed Science*, 59(4), 517-526. <https://doi.org/10.1614/WS-D-11-00051.1>

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