



PIONEER

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SOYBEANS



# Why use a residual herbicide in soybeans?

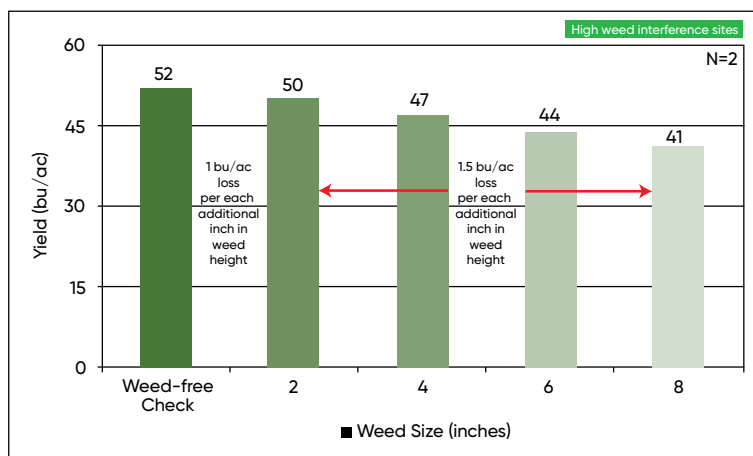
## 1 Reduce early-season weed competition

As in corn, soybeans have a Critical Weed Free Period. Soybeans must be kept weed-free until the V3 soybean growth stage for optimal yield. Pre-emergent residual herbicides control weeds before they compete with the crop, including weeds that have continual emergence or emerge later.

According to University of Guelph professor Peter Sikkema, losses to soybean yield are significant in high weed density, where 2" weeds cause yield losses of 1.8 bu/ac. The next several inches bring another 1.5 bushel loss for each additional inch in weed height. By the time weeds are 8" tall, yield loss is 11 bu/ac less than the weed free check.

For example, 2" high weeds in 1,000 acres of soybeans, at \$13 per bushel, can cost a grower \$23,400. At 8", losses reach \$143,000. Profit losses of this magnitude can result from not using a residual pre-emergent herbicide or a delayed post-emergent herbicide application.

## Soybean yield is impacted by weed size at time of post application



Peter Sikkema, University of Guelph

## 2 Less risk for post-emergent herbicide applications

Residual herbicides provide protection if and when post-emergence herbicide application is delayed due to the following risks:

- Rain events
- Windy conditions
- Large acreage
- Equipment breakdown

### Residual Does Matter



Non-residual  
burndown



Pre-emergence  
residual herbicide

## 3 Weed resistance management

To delay the onset of herbicide resistance, using soil applied herbicides with different modes of action is recommended. More herbicide options exist for pre-plant/pre-emerge timing than post-emergent timing



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