

COMMON LAMBSQUARTERS CONTROL WITH GLYPHOSATE: WHAT'S THE PROBLEM?
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Common lambsquarters is a difficult weed to control in glyphosate-resistant cropping systems. Field and growth chamber research has been carried out on common lambsquarters collected from long-term glyphosate weed shift trials being conducted in Colorado, Nebraska, and Wyoming. Growing common lambsquarters under controlled conditions requires special attention to lighting conditions, as it is a short day species. A photoperiod of at least 16h, high red:far red ratio, and high light intensity all help delay floral evocation in common lambsquarters. Initiation of flowering can significantly reduce the response of this weed to glyphosate in the greenhouse. High variability in glyphosate response has been observed from plants collected from within the same field history and in close proximity. At either end of the tolerance spectrum, growth chamber studies tend to mirror field studies. However, lines that show intermediate response to glyphosate may produce more variable results in the growth chamber than in the field.