

Technical Bulletin



Effectiveness of TOUGH® 5EC on Common Lambsquarter Control in Chickpeas- Washington

Overview

A study was conducted in 2019 at the Palouse Conservation Farm Station near Pullman, Washington to evaluate crop tolerance and the efficiency of TOUGH® 5EC (pyridate) applied postemergence in chickpeas just prior to bloom. Prior to the EPA registration of TOUGH 5EC in September 2020, broadleaf weed control was dependent on preemergence herbicides, relying heavily on both timely and adequate rainfall.

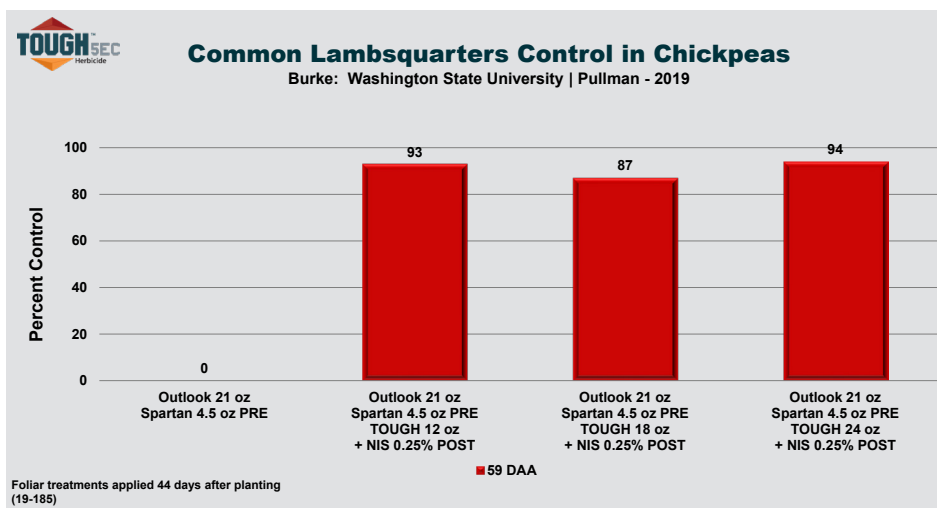
Methods

Chickpea were seeded May 3, 2019. Prior to emergence (May 13), the site was blanket sprayed with Outlook® (21 fl oz/acre) and Spartan® (4.5 fl oz/acre). The study was conducted in a randomized complete block design with 4 replications of 10 ft by 30 ft long plots. On June 16, treatments of TOUGH 5EC were applied, at different rates, just prior to bloom. Air temperature was 75° F, soil temperature 66° F with winds of 2 mph from the east. Treatments were applied with a CO₂ powered backpack sprayer and a 5 ft boom with 4 Teejet 11002VS nozzles, calibrated to deliver 15 gallons per acre (GPA).

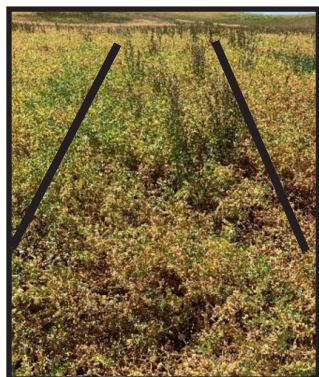
59 DAT, all treatments controlled common lambsquarters compared to the PRE only treatment of Outlook + Spartan. TOUGH 5EC applied with NIS at a rate of either 12, 18, or 24 fl oz/acre, had 93, 87, and 94% common lambsquarters control, respectively. (See chart)

Results

This study revealed that TOUGH 5EC is an effective herbicide for postemergence broadleaf weed control in chickpeas, offering both efficiency and crop tolerance alone (with either NIS or COC*).



All plots shown in photos below (59 DAT) were treated with "PRE" and TOUGH 5EC was applied with NIS.



Outlook + Spartan PRE



TOUGH 5EC 12 oz



TOUGH 5EC 18 oz



TOUGH 5EC 24 oz

*TOUGH 5EC (12 fl oz/acre) with COC had 92% control.