

DANDELION CONTROL WITH SPRING APPLIED TREATMENTS IN NO-TILL SOYBEAN. Reece A. Dewell, William G. Johnson, and J. Earl Creech, Postdoctoral Research Assistant, Assistant Professor, and Graduate Research Assistant, Purdue University, West Lafayette, IN 47907.

The combination of no-till production practices and low-residual postemergence herbicide programs has led to a resurgence of several perennial weed concerns. Dandelion is one such concern in Indiana, especially in the northeastern portion of the state. A field study was conducted near Huntington, IN, about 10 to 15 miles SSE of the Northeast Purdue Agricultural Center (NEPAC), to evaluate various herbicide combinations for spring dandelion control in soybean. Preplant treatments were applied on April 26 and soybeans drilled on May 31 by the cooperating farmer. A late postemergence blanket treatment of glyphosate (Roundup Weathermax) was applied by the cooperating farmer on July 3 to the entire study area. Visual dandelion control ratings were collected 19 DAT – pre, 37 DAT – pre, 73 DAT – pre / 5 DAT lpost, 86 DAT – pre / 18 DAT lpost, and 188 DAT – pre / 120 DAT lpost. At the early rating, the addition of 2,4-D to all glyphosate combinations reduced dandelion control. In contrast, the addition of 2,4-D (ethylhexyl ester) to paraquat combinations resulted in increased dandelion control. By the 37 DAT – pre rating, these 2,4-D interactions were only observed with glyphosate + flumioxazin (94% vs. 58%) and glyphosate + carfentrazone (87% vs. 74%). Glyphosate at 1.16 lb/A, glyphosate + 2,4-D (0.77 + 0.94 lb/A), and paraquat + chlorimuron ethyl&sulfentrazone +2,4-D were the only treatments still providing >85% control 73 DAT – pre. An attempted rating on August 7 (35 DAT – lpost) indicated that the late postemergence application (0.5625 lb/A glyphosate) made by the cooperating farmer on July 3, temporarily provided near complete dandelion control. A post harvest rating on October 31 showed that all chlorimuron ethyl&sulfentrazone (with or without 2,4-D) treatments were still providing >85% control. At this post harvest rating, glyphosate alone (both rates), glyphosate + 2,4-D (0.77 + 0.94 lb/A), and glyphosate + flumioxazin were providing >85% control also. (Dept. Botany and Plant Pathology, Purdue University, West Lafayette, IN).