

ASSESSMENT OF CURRENT HERBICIDE OPTIONS IN DOUBLE CROPPED PUMPKINS FOLLOWING WHEAT IN SOUTHERN ILLINOIS. Robert J. Britenstine, Bryan G. Young, and S. Alan Walters, Graduate Research Assistant, Professor, and Associate Professor, Department of Plant, Soil and Agricultural Systems, Southern Illinois University, Carbondale, IL 62901.

There is growing interest in double cropping no-tillage pumpkins following winter wheat in southern Illinois. Although weed management is a major problem of no-tillage pumpkin production, wheat residues may provide some weed control along with other ecological and monetary benefits. Therefore, a field evaluation was conducted to determine the influence of harvested wheat residues on weed suppression along with various herbicide combinations in no-tillage 'Magic Lantern' pumpkin production during 2006 and 2007. The experiment was designed as a split-plot with four replications. The main plots were with or without harvested wheat stubble and subplots consisted of six herbicide treatments.

Plant stunting at 28 days after transplant (DAT) was greater for pumpkins planted into bare soil compared with pumpkins planted in to wheat residue in 2006. However, stunting was not evident at 56 DAT during 2006 or at both 28 and 56 DAT during 2007. The presence of wheat residues did not impact control of morningglory spp., common waterhemp, redroot pigweed, and common cocklebur during 2006 or 2007. In 2006, all herbicide combinations provided 65 to 80% control of common waterhemp and redroot pigweed at 56 DAT. Furthermore, morningglory spp. control was less than 50% for all herbicide treatments. In 2007, all herbicide treatments provided similar, yet insufficient, control ($\leq 30\%$) of common waterhemp and redroot pigweed. Common cocklebur control was greater in those treatments that included halosulfuron (54 to 80%) than treatments without halosulfuron. Pumpkin fruit size was greatest in treatments with wheat residues compared with bare soil over both years. All herbicide treatments produced a similar number of fruits per hectare in both 2006 and 2007. Although it is possible to successfully grow pumpkins following winter wheat, any additional weed control was generally not provided by wheat residue.