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Yield Of Glyphosate-Tolerant Cotton As Affected By Topical Glyphosate Applications On The Texas High Plains And Rolling Plains

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Boll abscission may occur following glyphosate application to glyphosate-tolerant cotton (*Gossypium hirsutum* L.) due to altered male floral morphology and poor pollination. The ability of glyphosate-tolerant cotton to compensate for boll abscission ascribed to glyphosate may be limited with stripper-type cultivars grown on the Texas High Plains and Rolling Plains. The objective of this study was to determine yield response of stripper cotton to glyphosate applied postemergence topically after the four-leaf stage. On the Texas Rolling Plains, yields of cultivar Paymaster 2326RR were recorded following glyphosate applied postemergence at the 6-, 9-, or 12-node stages. On the Texas High Plains, yield of cultivars Paymaster 2326RR and Paymaster 2200RR was recorded following glyphosate applied postemergence at mid-bloom or later. At one of four locations, glyphosate applied postemergence to four-leaf cotton followed by glyphosate applied postemergence to 9- or 12- node cotton reduced yields. Yield also was reduced by glyphosate applied postemergence to mid-bloom cotton but not by glyphosate applied postemergence at six nodes above white flower or later. These studies suggest stripper-type glyphosate-tolerant cotton may suffer yield losses when glyphosate is applied contrary to the label.