



Promoting the Re-Establishment of Herbaceous Native Plants on Mixed Brush Plant Communities With Roller Chopping

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This study was conducted to determine if seeding is required following roller chopping in south Texas mixed brush communities to increase herbaceous vegetation. Results will be provided to the USDA-NRCS to consider the modification of the e-FOTG (314) Brush Management practice standard in which reseeding is required after roller chopping. Three study sites were selected, Welder Wildlife Refuge, Shining Ranch, and Wellhausen Ranch, with 36-38, 24-26, and 16-18 inches of precipitation, respectively. Treatments evaluated were: roller chopping (R), roller chopping and seeding a native plant mix (RS), and control (C). A factorial arrangement of treatments in a randomized complete block design with three replicates was used. Response variables included cover of brush and herbaceous vegetation and botanical composition of herbaceous vegetation. An interaction ($P < 0.05$) site by treatment for herbaceous and brush cover was obtained. At the Welder Wildlife Refuge treatments resulted different ($P < 0.05$) for herbaceous cover with 75, 66, and 57% for C, R, and RS, respectively. At the Shinning Ranch herbaceous cover resulted similar for R (25%) and RS (24%), but different ($P < 0.05$) from C (18%). At the Welhausen Ranch herbaceous cover was higher ($P < 0.05$) in C (5%), and R (1.4%) and RS (0.6%) where similar. The percentage of brush cover for each site showed the same tendency in the three sites, higher percentage of brush in C while R and RS were similar. Preliminary results indicate that no seeding is needed after roller chopping to increase herbaceous vegetation in south Texas independently of the precipitation regime.

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