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Field studies were conducted in 1999 and 2000 at the Big Horn County, WY to evaluate the effect of postemergence treatments with or without layby treatments on venice mallow control in sugarbeet. Postemergence treatments consisted of the combination betamix or progress plus upbeet plus stinger using micro-rate and full rate systems. Methylated seed oil at 1.5% v/v. was added to the micro-rate system. Each treatments consisted of three applications, seven days apart, starting at cotyledon or two leaf-venice mallow stage. Layby treatments consisted of nortron and Frontier applied few hours before the second irrigation. Venice mallow control was moderate with both systems, micro rate and full rate, when applied at cotyledon-stage and good to excellent when applied at two leaf-stage. Sugarbeet injuries were slightly higher with full rate than with micro-rate system. Layby treatments appears to increase venice mallow control by at least 5%. Sugarbeet injuries with frontier were slightly higher than with nortron. Sugarbeet root yields were higher in herbicide treated compared to the check and yield increases were closely related to venice mallow control. Sugar contents among all treatments including the check were similar.