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Early Harvest of Sugar Beet: the effect of Seeding Date and Variety.

A significant change in the sugar beet industry has been the adoption of an early harvest clause in the grower-processor contract. The objectives of this experiment were: 1) To describe sugar beet yield and quality response to harvest date, with emphasis on the management effects of seeding date and variety, and 2) To determine the impact on sugar beet yield and quality of late seeding date and replanting management decisions. The experiment was located at the University of Wyoming Research and Extension Center in Powell, Wyoming during 1992 on a Garland clay loam (fine, mixed, mesic; Typic Haplargid). Treatments consisted of establishing 18 varieties on five seeding dates between 30 March and 8 June and harvesting every two weeks between 10 September and 22 October. Later seeding date decreased root yield from 26 to 14 T/A and sugar content from 19.3 to 18.5 percent. Loss to molasses increased with later seeding date from 0.63 to 0.80 percent. Recoverable sucrose and grower return decreased 75 lb/A and $8.50/A for each day delay in seeding date. Sugar beet variety differences were observed for every performance measurement. Variety X seeding date and variety X harvest date interactions were observed for loss to molasses. During the harvest period between 10 September and 22 October, root yield increased from 18 to 22 T/A, sugar content increased from 17.8 to 19.7 percent, loss to molasses decreased from 0.73 to 0.65 percent, and recoverable sucrose increased from 6200 to 8400 lb/A. Grower return during harvest increased approximately $100/A, with the greatest return realized during normal harvest after 1 October. Sugar beets seeded on 8 June did not recover production costs, while the 22 May seeding date recovered production costs after the 24 September harvest date.