

GILES, JOSEPH F*, ALLAN W. CATTANACH, and NORMAN R. CATTANACH, Department of Soil Science, North Dakota State Univ., P.O. Box 5638, Walster Hall, Fargo, ND 58105. Effect of wheel traffic on sugarbeet production.

To understand and assess damage to sugarbeet production by soil compaction generated by vehicular traffic, ten grower fields on various soil types were selected and sampled at harvest in 1996. Plant counts, beet weights and quality analyses were obtained from rows away from, next to, and between the tractor dual tires. Six replications were obtained from the planter/cultivation and planter/sprayer tracked areas in each cooperators commercial field. Results show a significant reduction in recoverable sugar at one location. At eight of the ten sites, a nonsignificant increase in recoverable sugar resulted from the vehicular traffic.