MARTIN, SUSAN S. USDA, Agricultural Research Service, 1701 Center Avenue, Fort Collins CO 80526. - Sugarbeet organic acids: distribution and post-harvest changes.

Organic acids, some important intermediary metabolites and others characteristically accumulated by sugarbeet (*Beta vulgaris* L.), comprise about one-fifth of the non-sucrose components of typical sugarbeet extracts. I report the distribution of the major organic acids in the roots and peel (surface layers) of four diverse sugarbeet cultivars, and their changes through eight weeks of highquality storage at 4°C. Aqueous extracts of frozen tissue were analyzed by HPLC on an HPX-87H ion exclusion column (4.6 X 300 mm) at 60°C, eluting with 0.01N H₂SO₄ at 0.5 ml/min; organic acids were detected by UV absorbance at 220 nm. Major organic acids present at harvest were oxalic, citric, malic, and succinic. Lactic, formic, and acetic acids, which can accumulate during storage as a result of monosaccharide degradation, remained at trace or very low concentrations under the constant-temperature, high quality storage used for this study. Pyrrolidone carboxylic was present at low levels at harvest and increased slightly in storage. Per gram of sucrose, the sugarbeet peel contains about 5X-10X the organic acid concentration of the whole root. The relative importance of each of these compound as an impurity in processing is related to the solubility of its calcium salt, which determines the effectiveness of removal by liming.

aproport plots in the demonstration triate. The 1603 rate near Hillshom, ND: includes 13 positypes, 4 or which were in use yield trial. Dimitant differences due to primion effects were observed after application of 0.75 pdA gipphonae. The response varied from no startge to billed. Four polarypes (56, 59, 72, 33) is the demonstration and has not yields correcting the chircle. The 1994 rest test the MD, accluded 6 politypes, 5 of which were in the yield trial. Transgenic from to the provident were sprayed with either 0 to 1.5 pdA gipphones. While same plots in the demonstration will over sprayed with either Root yields of three possyptic (19, 58, 77) sprayed with 1.5 pdA gipphones exceeded the chiralis. Neither not yield nor marrote content of these three fines were returned by gipphone treatment. The level of our pickle neutrons content of these three fines were returned by gipphones treatment. The level of our splits and possible content of these three fines were returned by gipphones treatment. The level of our splits are possible. These three fines were returned by gipphones treatment. The level of our splits for contents of these three fines were returned by gipphones treatment. The level of our splits are possible. These three fines were returned by gipphones treatment. The level of our splits for content of these three fines were returned by gipphones treatment.