

CARLSON, JEFFREY L, Southern Minnesota Beets Sugar Cooperative, 83550 County Road 21, P.O. Box 500, Renville, MN 56201. **Applying Control Charts to Beet Sugar Factory Operations.**

Control charts can be a powerful tool for achieving and maintaining statistical control of a process, identifying important causes of variation, running process capability studies and achieving a better understanding of a process. However, there are several problems in applying them inherent to beet-sugar factory operations . These include the high variability seen in the beet juices and in production conditions, the difficulty in choosing the appropriate sampling plan for large vessels, the cost of analyses, and how to deal with batch pans. This paper reviews the literature and discusses potential solutions for these problems including rational subgrouping, control charts without subgrouping, X and moving range for batch processes and moving averages. Some beet sugar examples are given.