SMITH, J. A., University of Nebraska, 4502 Ave. I, Scottsbluff, NE 69361. - <u>Sugarbeet plant spacing</u> performance of seven sugarbeet planter models.

## ABSTRACT

Accurate spacing of sugarbeet plants within the row can be a factor in effective weed control, in efficient harvest, and in sugar yield. As a result, growers are seeking better performance from their planters, examining different models, accessories, and operating practices, to achieve more accurate plant spacing. The objectives of this study were to examine plant spacing accuracy of common sugarbeet planters and one new planter; compare laboratory seed spacing accuracy with field plant spacing accuracy; and evaluate new components introduced for the MaxEmerge 2 planter. A total of 500 spacings were measured for each planter model. Planter models evaluated were the Deere 71, Milton, Deere MaxEmerge 2, Monosem, Stanhay-Webb 590, WIC and Kleine. There were both field plant spacing and laboratory seed spacing accuracy differences among planter models. The Kleine planter provided the most accurate plant spacing, followed by the Milton and Stanhay-Webb 590 planters. The new components for the MaxEmerge 2 planter did not substantially improve plant spacing, but they did improve seed depth control. Accuracy of seed spacing in the laboratory was much better than plant spacing accuracy in the field, with most planters. The reason was movement of the seed within the seed furrow. Seed spacing accuracy on a grease belt test stand did not consistently represent plant spacing accuracy in the field. Seedbed conditions, seed coating type, and field speed influenced plant spacing accuracy.

atend establishments have been the result or improved seedbed preparation, seed quality, and planter precision and pichormance. A program designed to allow growers to evaluate the performance or their planter units on test stands designed to simulate ground speed and seed specing has developed during this time period. Making around speed and seed specing corrections to improve the performance of the planter has increased the confidence of the grower prior to actual field planting and aluminated the number of seed related field calls for seed suppliers in the spring. Plant population counts prior to harvest and harvested best counts have increased during proportion and are wall corrected with increased recoverable sugar visites.