SEEDLING COLOR AND YIELD OF SUGAR BEETS

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INTRODUCTION

The common commercial varieties of sugar beets show varying percentages of individuals with a definite red pigmentation, the remainder being of a yellow shade and without red color. The color is most noticeable in the hypocotyl of young seedlings and in the small leaf buds in the crown of mature beets. Similar observations have been previously made by various workers (1, 2, 3). The red coloration ranges from a carmine red to light shades of pink and the yellow coloration varies from deep orange to light shades which appear almost white. In this work the separations attempted have been into a class called red and into a class called yellow which includes the rest of the plants of varying degrees of color from strong yellow to a complete absence of pigment. In the standard varieties of sugar beets the red or yellow color is not found in the flesh of the root. The epidermal cells of the leaves of sugar beets do not show pronounced color, but mangels and various horticultural varieties show strong leaf color in the seedling stage. Leaf petioles usually show more color than leaf blades.

In young sugar-beet seedlings of the common commercial varieties the variations in color of the hypocotyl are very noticeable at thinning time. The full range of variation in colors is found in almost all

1Contribution from Office of Sugar Plants, Bureau of Plant Industry, U. S. Dept. of Agriculture, Scottsbluff, Nebr. Received for publication March 6, 1931.
2Associate agronomist.
3Reference by number is to “Literature Cited,” p. 743.