

The U.S. 15 Variety of Sugar Beet

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Winter plantings of sugar beet in California have been made chiefly with one variety of sugar beet, U.S. 15. The non-bolting tendency of this variety, even if planted early in October in the Imperial valley or in November or December in the San Joaquin valley, or elsewhere in Southern California, made it the dominant choice for early seedings. More than any other variety, it is responsible for the development of sugar beet culture in the Imperial valley. The variety, in addition to its non-bolting character, has distinct advantage over other varieties because it has moderate resistance to curly top and relatively high resistance to downy mildew (*Peronospora schachtii* Fckl.) and rust (*Uromyces betae* (Pers.) Lev.). It is very susceptible to leaf spot (*Cercospora belicola* Sacc.) but this disease is never a factor in the Imperial valley and minor in other locations where U.S. 15 is grown. The higher curly top resistance of U.S. 56, also a non-bolting variety, has given it advantage over U.S. 15 in locations subject to curly top.

The U.S. 15 variety is a product of breeding research conducted at State College, New Mexico, in cooperation with the New Mexico Agricultural Experiment Station. Mass selection of highly resistant plants was made in 1927 in a field of R. 8c G. Pioneer sugar beets in which curly top had destroyed nearly all the plants. A second selection for curly top resistance was made from the progeny of the selected roots, high sucrose quality being also a factor in selection. Tests in California in 1932 and 1933 by C. A. Lavis and by F. G. Larmer in 1934 revealed the non-bolting character of the variety, as compared to that of European varieties or other curly top resistant strains. These findings, as well as the commercial possibilities of the variety, were confirmed by a large-scale test in 1935. The variety was made available to beet sugar companies through the Curly Top Resistance Breeding committee by direct increases, without selection, of the elite seed.

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