Hybrid Carrot Seed Production in Central Oregon

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Hybrid carrot seed production had its start in Central Oregon around 1975. Central Oregon Seeds, Inc. (COSI) was formed in 1979 with Mike Weber as the managing partner. With over 30 years of experience, there have been three important factors that stand out as to the success of multiplying hybrid carrot seed varieties for breeding companies throughout the world. First, the summer climate consists of a warm day and cool night high desert, with a dry warm September harvest season and not to harsh of a winter. Secondly, the grower group is very progressive with an experienced seed production mentality. And finally, COSI staff has teamed up with the growers to improve management practices and excel in quality seed production of new carrot varieties. Research support and solutions from the local Oregon State University experiment station has been significant in this long term process. The list of strategic considerations and management practices is vast. Initially, plotting field locations with proper isolation distance by variety and type is extemely important to the genetic integrity of each hybrid produced. The seed-to-seed method of production starts with planting the parent lines in August and overwintering the crop, with a normal harvest time in September. The root-to-seed method begins with vernalized roots being transplanted in April, and the seed harvested in September. Fall and spring weed, insect, and disease control, along with proper fertility, are essential. Irrigation methods include furrow, sprinkler and, more recently, drip irrigation. A most vital aspect of pollination is to have dependable professional beekeepers who provide quality hives at the right time (nick) between male and female parent lines. As the crop approaches harvest, the stage has been set for maturation of the endosperm and embryo of the hybrid seed, which is then harvested and conditioned for future sale to the farmer who plants the seed to produce the fresh market carrot.