Two field experiments were conducted on a sugarbeet field at Banger El-Sokar area, Borg El Arab area, Alexandria Governorate, naturally infected with the root-knot nematode, Meloidogyne javanica, during the 2021/2022 and 2022/2023 seasons to study the effect of four planting dates and four sugarbeet cultivars on root-knot nematode reproduction, and crop productivity and quality. Hence, delaying the planting date can be considered as an agricultural method for nematode control. Delaying the planting date of sugarbeet from 10th August to 10th November significantly reduced the numbers of the second stage juveniles larvae of nematodes in the soil from 31436 to 6145, the different stages in the root system from 3615 to 1296, and the final nematode population from 35051 to 7441, this decrease is 71.69, 48.79 and 69.30%, compared to the first planting date, respectively, while the value of the reproduction factor decreased significantly from 19.47 to 4.13-folds, compared to the initial population (Pi). Sugarbeet cultivar, Oscar Poly recorded the highest significant reduction in the values of the studied nematode reproductive traits, and it also achieved the highest increase in top, roots, raw sugar and recoverable sugar yields (tons/fed) at all tested planting dates, compared to the other sugarbeet cultivars. Therefore, Oscar poly cultivar is suitable for cultivation at all tested planting dates, while cultivars, Francescan, Mirador and Sandorare suitable for cultivation during the 4th planting date only in soil contaminated with root-knot nematode, M. javanica at semi-arid lands.