

Effects of delayed pruning and girdling grapevines in different trellising systems in Uzbekistan and comparison effects on ripening time, harvest quality and volume

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Independent impact tests of trellising systems, delayed pruning and girdling in vineyards were undertaken on two farming enterprises in two provinces of the Fergana Valley. “Dolanalik Bogbon Mevasi” farm enterprise in Andijan Province and “Azizbek AXA” in Fergana Province hosted the trials from 2013–2016 in collaboration with the Andijan Agricultural Institute, participating farm entrepreneurs and USAID’s program in Uzbekistan.

Three trellising systems were tested for impact on bunch and berry quality, ripening time variation, and harvest volume. The tested systems were traditional vertical “I”, horizontal roof trellising known locally as the “Altyarik” method, and open gable “Lyre”. Grape cultivars included seeded ‘Rizamat’, ‘Andijon Qora’, ‘Khusayni’, ‘Pobeda’, ‘Lady Finger’ (Kelin Barmoq) and seedless ‘Black Kishmish’ (Qora Kishmish). Quantitative results and benefit-cost-analysis indicate the Lyre system as most economically viable and technically comfortable option for table grape production with 40–55 % more yield compared to traditional “I” system under local conditions.

Trunk and cane girdling of grapevines were also tested with the same varieties with both exhibiting early ripening by 15–30 days compared to the control. However, cane girdling was cited as the preferred method by practitioners for practical reasons. Trunk girdling also resulted in grapevine weakening when followed by severe frost damage during the wintering period. In contrast, cane girdling allowed the grapevines to remain productive and healthy in the years following severe frost and retained pruning flexibility due to the availability of canes in the subsequent year.

In the present 2015–2016 season delayed pruning under “I” and “Altyarik” trellising systems is being tested with 150–200 % additional fruit set observed in late pruned vineyards compared to traditional fall pruning.

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