



EFFECTS OF TRAINING, PRUNING SEVERITY AND LIMITED IRRIGATION BEFORE VÉRAISON ON GROWTH, YIELD AND QUALITY OF KALECIK KARASI CLONES GROWN IN CENTRAL NORTH OF ANATOLIA



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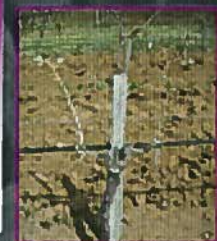


BACKGROUNDS AND AIMS



Kalecik Karası is the most popular local red wine variety of Turkey with its distinct violet coloured, medium-bodied, elegant, soft tasting wines with red berries, sour cherry, almond, green pepper and carnation flavors, and its name comes from a small town "Kalecik" located to 70 km east of Ankara on the valley of Kızılırmak.

This experiment was planned to determine the effects of training and pruning level on growth, yield and quality of three leading clones (9,12,16) of Kalecik Karası grown under non and limited irrigated conditions of Central North of Anatolia between 2004-2007.



METHODS

Experimental vineyard were established in 1999 with 1,5 x 2,5 m planting density on 1103 P cl 113 and grapevines were trained as bilateral cordon and Guyot with 75 cm trunk height, and pruned at three levels in non (12, 15, 18 buds / vine) and limited (15,18,21 buds / vine) irrigated treatments at berry set, pea size and véraison.



LOCAL CHARACTERISTICS OF EXPERIMENTAL VINEYARD

Coordinates	: 39° 57' 51" North Latitude, 32° 51' 51" East Longitude
Altitude	: 890 m
Slope	: %5 to South
Temperature	
Annual	: 12.5 °C
Growing Season	: 18.9 °C
Warmest Month	: 25.5 °C
Coldest Month	: 0.8 °C
EHS	: 1911 degree-day
Rainfall	
Annual	: 360.7 mm
Growing Season	: 192.6 mm
Soil (0-90 cm)	
Texture	: CL
pH	: 7.8
EC (mmhos/cm)	: 0.6
Active Lime (%)	: 4.4
Organic Matter (%)	: 0.6



RESULTS

Clonal variation on budburst performances and crop quality is negligible, but clone 16 and 12 had higher growth and yield performances than clone 9 in both non and limited irrigation.

Limited irrigation till véraison had no marked effect on crop quality; however, growth capacity, berry size and yield were increased, significantly.

Although both training systems were found to be applicable for all three clones, Guyot had some slight favors to cordon.

Budburst performance was negatively affected by the increase in pruning level (crop loading) and yield in non and limited irrigation. Despite minimum loading (12 buds / vine) in non- irrigated vines decreased yield markedly, crop quality was improved. Whereas, maximum loading (21 buds / vine) for limited irrigation resulted in opposite effect.



CONCLUSIONS

Medium loading (15 buds for nonirrigation, 18 buds for limited irrigation till véraison) for bilateral cordon and Guyot training systems can be recommended for three leading clones (9,12,16) of Kalecik Karası grown at semi-and conditions of Central North of Anatolia.

SIGNIFICANCE OF STUDY

This is a unique study to find out how the agronomic performances of three leading clones of Kalecik Karası were influenced by the interactions of the training systems and pruning levels for non and limited irrigated growing conditions in semi-arid climate of Central North of Anatolia.



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