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Pruning studies in some white wine grape varieties for yield and yield contributing parameters under Western Maharashtra conditions

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ABSTRACT : In present investigation, effect of five different pruning treatments (4,6,8,10 and 12 buds/cane) was studied on four white wine grape cultivars (Viognier, Ugni Blanc, Sauvignon Blanc and Chenin Blanc). The growth and yield contributing parameters *viz.*, bud sprouting percentage, cane fruitfulness and bunch weight were found maximum in severely pruned treatments *i.e.* 4-6 buds/cane. Veraison and maturity was found early in the same treatment. However, for higher number of bunches and yield, each variety responded differently in different pruning treatments. The variety Viognier recorded highest yield (6.87 kg/ vine; 15.26 MT/ha) in 8 buds/cane pruning treatment, Ugni Blanc in 4 buds/cane (5.05 kg/vine; 11.23 MT/ha), Sauvignon Blanc in 4 buds/cane (5.16 kg/vine) and Chenin Blanc in 12 buds/cane pruning treatment (16.90 kg/ vine; 37.54 MT/ha).

KEY WORDS : Pruning, Wine grape, Yield

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The grape is one of the ancient fruit crop of India, which is cultivated on an area of 1,11,000 ha. with production of 12.35 lakh MT and productivity of 11.10 MT/ha. (NHB, 2011). Approximately, 78 per cent of the total production, irrespective of the variety, is consumed as fresh in India (Chadda 2008). Arrival of more than 70 per cent of the total production in short span of time, *i.e.* March – April, lack of cold storage facilities and single type of market *i.e.* fresh fruit trade, creates gult in market, this leads to fall in prices. Hence, there is an urgent need to diversify grape uses, such as wine and juice which can solve the market problems. Thus the development of suitable wine technology is a potential area for future research.

RESEARCH METHODS

The research work was conducted during year 2007-08 at All India Co-ordinated research Project on Grapes, Mahatma Phule Krishi Vidyapeeth, Rahuri on five year old, own rooted wine grape varieties planted with 3.0 x 1.5M spacing. The experiment was laid out in split plot design with four main plot treatments *i.e.* varieties {Viognier (M_1), Ugni Blanc (M_2), Sauvignon Blanc (M_3), Chenin Blanc (M_4)} and five subplot treatments *i.e.* pruning levels {(4 (S_1), 6(S_2), 8(S_3), 10(S_4) and 12 (S_5) buds/cane)} with three replications. Pruning was done in October 2007. Twenty five canes were maintained on each vine and observations were recorded on two vines of each replication.

RESEARCH FINDINGS AND DISCUSSION

The data for main and subplots are presented Table 1 and subsequently for interactions. The results are presented below under suitable headings.

Bud sprouting (%):

The data presented in Table 1 revealed that there were significant differences in main plots, sub plots and on