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Lewis Horticulture – Let's grow together ™
'GIRRAWEEN' 28 Carmelo Road, Buckland Park. P.O. Box 798 Virginia 5120, Australia
Telephone (08) 8380 9598, Fax (08) 8380 9774, Web www.lewishorticulture.com.au
e-mail – malcolm@lewishorticulture.com.au

SUMMATION OF RESEARCH INTO - FRUIT THINNING AND ITS EFFECTS ON FRUIT QUALITY AND SIZE

Extracts from author :- Ibrahium Kahramanoglu, European University of Lefke, Faculty of Agricultural Sciences and technologies, Lefke, Northern Cyprus.

A very recently released scientific article on this subject has just been released (2018). I have summarised the important points into this document.

The trial was undertaken on 7 year old well developed pomegranate trees of the cultivar Wonderful. Wonderful has a number of variations and is capable of growing under different agro – climatic conditions ranging from tropical, sub- tropical and temperate environments. The cultivar Wonderful firstly originated in Florida.

It is well documented that large sized fruits have significant importance for premium markets as consumers have preference for large sized fruits with a high total aril weight and juice content.

Depending upon location in the southern hemisphere the main flowering of Wonderful is in the period of late September to early November with the fruit becoming ready for harvesting commencing around 150 days following fruit set. In tropical locations this timing is altered.

Fruits are derived from hermaphrodite flowers with male flowers failing to set fruit.

The research recommends that fruit thinning should occur around 3-4 weeks after full bloom and fruit set once the fruits are about walnut in size. Generally, it is recommended that with fruit thinning that the terminal fruit bud is left and that axillary buds are removed.

Fruit thinning increases the available carbohydrates which are responsible for increasing fruit weight and size. Not only does fruit thinning improve fruit size it also prevents the occurrence of
non – commercial sized fruits.

Results showed that fruit thinning (numbers of fruit on the tree) significantly influence the juice percentage of fruits even of the same size. There is also a correlation between the number of arils and juice percentage contained in the pomegranate fruit.

The trials divided the trees into 5 groups leaving:-

- 80 – 89 fruits per tree
- 90 – 99 fruits per tree
- 100 – 114 fruits per tree
- 115 – 134 fruits per tree
- 135 – 150 fruits per tree

The results indicated that the highest total yield with an average of 49.8 kg / tree was obtained from the category of 90 – 99 fruits per tree.

Interestingly the lowest yield measured was from the category of 80 – 89 fruits per tree that averaged only 39.2 kg / tree, more than 10 kg/tree less.

The 3 remaining groups each averaged around 46 kg/ tree, but each contained a percentage of non – commercial sized fruit and contained some cracked fruit. Increasing harvesting and processing costs.

In the two lower fruit count groups (ie 80 – 89 and 90 – 99 fruits)there was no evidence of fruit cracking.

Based upon the results obtained from this trial it can be concluded that leaving more fruits on the tree not only reduces the total yield, but also reduces the average fruit weight for all sizes.

According to the research results obtained, leaving 90 -99 fruits on each well developed tree of the variety Wonderful provides the highest yield of around 50 Kg / tree. Thus, it is recommended that the number of fruits per tree be limited to 100 after which there is a considerable decline in fruit weight, fruit size, fruit quality and total yield.