Studies on blooming and fruiting of balady lime ”cirtus aurantifolia”

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This investigation was carried out during two successive seasons of 2003 and 2004, on mature, Baladi lime trees (15 — years old), grown in sandy soil at Orientals for Yrban in Pelbase region, Sharkia Governorate. This study was conducted to find out the possibilities of encouraging the lime trees to produce fruits out of season and appearance of lime fruit over the whole year specially in winter months to maximize the profitability of lime producers.The following treatments are studied:I-Control.2-Girdling 1mm.3-Girdling 2 mm.4-Paclobutrazol 250 ppm.5-Paclobutrazol 500 ppm.6-Paclobutrazol 750 ppm.7-Girdling 1 mm + Paclobutrazol 250 ppm.8-Girdling 1 mm + Paclobutrazol 500 ppm.9-Girdling 1 mm + Paclobutrazol 750 ppm.10-Girdling 2 mm + Paclobutrazol 250 ppm. I - Girdling 2 mm + Paclobutrazol 500 ppm. 12- Girdling 2 nun + Paclobutrazol 750 ppm.109 Summary and ConclusionThese treatments were applied at three dates i.e., March, June, September.The important results in this research are in a separte trees summarized as follow: 5.1. Vegetative growth:The presented date cleared that girdling in spring treatment increased leaf area and total carbohydrates in shoots than paclobutrazol (PP333) or control treatment. The effect of dates indicated to treated lime in September was best on vegetative growth than March or June.Generally, the best treatment in this respect was found in girdling 2 nun PP333 750 ppm treatment as compared to the other treatments under study in September treatment. Also, girdling alone or with PP333 or with combination reduced shoot length, growth rate and leaf dry weight percentage than control. 5.2. Flowering, yield and refruiting:After this research, results cleared that girdling treatment gave the highest values of fruit set, yield and refruiting of lime trees. Also, flushes of autumn was more effective in increasing of fruit set percentage than spring or summer flushes. While, the opposite trend was showed in yield and refruiting were concerned. Generally, girdling I mm + PP333 750 ppm treatment gave the highest values of fruit set and yield, respectively.The best result on fruiting / tree in March treatment was found in girdling 2 mm + PP333 at 750 ppm treatment, also March treatment gave yielding from August (2003) to March 2004.Summary and” Conclusion 110Moreover, June treatment gave yielding from November (2003) to May (2004) and the best result on the yield / tree in June treatment was girdling 1 mm or girdling 1 mm + PP333 at 500 or 750 ppm treatment. While, September treatment gave yielding from February (2004) to August (2004), the best result in this respect was girdling 2 mm alone or combined with PP333 at 750 ppm treatment. These results returned to on the economic net per tree or feddan yielding, it showed that the best result on the economic net per tree (187.3 pound) or feddan (31466.4 pound) with girdling lmm + PP333 at 500 ppm treatment. Also, with using girdling alone or combined with PP333 it may be appearance the lime fruits in market through the year and these treatment especially girdling 1 mm + PP333 at 500 ppm treatment as replacing for fasting. 5.3. Fruit quality:The presented data cleared that girdling or paclobutrazol treatment improved fruit diameter, fruit length, fruit weight, fruit volume and juice volume as well as acidity, TSS and V.0 of lime trees. The best result were founding September treatment in fruit diameter and fruit volume, while there no significant in the data fruit length, fruit weight and juice volume and chemical properties of fruits. Generally, girdling 2 mm + PP333 750 ppm treatment was more effective in increasing fruit quality measurements than the other treatments under study. On the other hand, the least values in physical and chemical fruit quality were obtained in PP333 250 ppm treatment.