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Effect of time and intensity of shoot pruning on fruit size, yield and quality of guava (*Psidium guajava* L.) under western U.P. conditions

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Abstract
The present study was conducted during 2019-2020 at Horticultural Research Centre, of Sardar Vallabhbhai Patel University of Agriculture & Technology, Modipuram, Meerut. Experiment was conducted in two seasons (Mid-Feb, Mid-May) of each year with following treatments of pruning intensities i.e. 0% (control), 20%, 30%, 50%. For this experiment the Shweta cultivar was selected. The quality parameters were analyzed to determine the effect of pruning intensity and time of pruning on fruit size, yield and quality of guava. The results revealed that maximum number of flower per tree (302.42), length of sprouted shoot (57.65 cm) are found in second week of February with 50% of pruning intensity. The maximum height of tree (3.87 m), number of fruit per tree (149.36), number of fruit per shoot (8.00), fruit weight (205.00 gm), fruit length (13.01 cm), fruit volume (256.95 ml), fruit yield (30.56 kg/plant), fruit yield (339.55 q/ha), TSS (19.17^0 Brix), reducing sugars (5.53%), non-reducing sugar (2.32%), total sugars (7.85%), titrable acidity (0.25%) are found in second week of May with 50% of pruning intensity. The minimum are found in control (no pruning). In, general, the pruning of guava trees in the 2nd week of May with 50% pruning intensity level was found beneficial for enhancing fruit size, yield and quality of guava.

Keywords: Intensity, shoot pruning, guava, *Psidium guajava* L

1. Introduction
Guava (*Psidium guajava* L.) is also known as “Apple of Tropic” and one of the popular fruit trees of tropical and subtropical climate of India. It is known for its comparatively higher productivity, hardiness, adaptability and nutritive value. Its native is Peru (Tropical America) Lakpathi *et al.* (2013) [10]. Botanically, it belongs to the family Myrtaceae which comprises at least 150 genera and more than 5,650 species Govaerts, R. (2008) [7]. The total area according to NHB under cultivation of guava in India in the year 2018-19 is 2,70,000 ha and production is 4,10,7000 MT. The most important guava growing states in India are Uttar Pradesh, Madhya Pradesh, Bihar, Maharashtra, Gujarat, Andhra Pradesh and Punjab. In Uttar Pradesh, Allahabad, Varanasi, Lucknow are the major guava growing districts. Guava is a fast growing evergreen shrub or small tree that can grow to a height of 3 to10 m. It has shallow root system. The trunk is slender, 20 cm in diameter. The fruit is fleshy and pyriform that can weigh up to 500 g. The flowers are white in colour and about 3 cm in diameter solitary or in 2-3 flower clusters borne at the axils of newly emerging lateral shoots Orwa *et al.* (2009) [15]. The average nutritional composition of red fleshed guava contains ascorbic acid 175.5 mg/100 g, reducing sugars 3.92%, non-reducing sugars 4.79%, tannin 0.31%, starch 0.61% and crude fiber 4.58% Chundawat *et al.* (1976) [4].
In northern India, guava plant bears flower twice or sometimes thrice in a year. The spring flowering is called “Ambe Bahar” fruits ripen from July to September, June or monsoon flowering is called “Mrig Bahar” fruits ripen in from November to February and third flowering which comes in October is called “Hasth Bahar” fruits ripen in spring season, which also known as summer season crop Singh *et al.* (1996) [17]. It is emphasized that shoot pruning is done thrice a year. After a year, pruning operation is done especially in May-June,

September-October and January-February. Harvesting of fruits is generally done in January-February from the May-June pruned shoots. After harvest, the pruning is done above fruiting points. New shoots emerge after pruning of shoots during January-February. On these shoots, flowering takes place and fruiting is obtained during July-September. Second time pruning is done in May-June. After pruning, once again shoots emerge and flowering takes place, which yields fruits during December-February. These shoots are further pruned for the third time in September- October. It is done primarily for better canopy architecture. As a result of pruning in October, fruiting is obtained in March- April. This is the technique for maintaining an orchard for optimum production and dwarf tree size. The height of plants is restricted to 1.0 m, while an average production of 10-12 kg fruits plant is obtained every year.

2. Materials and Method

The experiment was conducted at the Horticultural Research Centre of Sardar Vallabhbhai Patel University of Agriculture & Technology, Modipuram, Meerut (Uttar Pradesh) during 2019-2020. The experimental material consists of 32 guava trees. Experiment was performed in 6 year old guava orchard. The plants were planted at spacing of 3 m x 3 m. Experiment was conducted with two seasons (mid-Feb and mid-May) and pruning intensities i.e. 0% (control), 20%, 30%, 50%. The experiment was laid out in Factorial Randomized Block Design (FRBD) consisting of 8 treatments and 4 replications.

Treatment details

1. Factor A: Time of pruning,
M_1 = Mid-Feb &
M_2 = Mid May

2. Factor B: Pruning intensity**,**
P_1 = No pruning (control)
P_2 = 20% pruning
P_3 = 30% pruning
P_4 = 50% pruning

3. Treatment combinations

T_1 = M1 P_0
T_2 = M_1 P_{20}
T_3 = M_1 P_{30}
T_4 = M_1 P_{50}
T_5 = M_2 P_0
T_6 = M_2 P_{20}
T_7 = M_2 P_{30}
T_8 = M_2 P_{50}

3. Results and Discussion

3.1. Growth character

It is evident from the data that various levels of pruning significantly affect the number of flowers per tree. The maximum number of flowers per tree (279.35) was recorded with the pruning intensity of 50% which was found significantly superior over treatment and minimum number of flowers (121.88) was recorded with control. Time of pruning was also found effective in influencing the number of flowers. Significantly maximum number of flowers (204.04) was recorded when pruning was performed in February; whereas minimum number of flowers (183.64) was found in May. The interaction effect of pruning intensity and time of pruning for number of flowers per tree was found significant. The maximum number of flowers (302.42) was recorded with 50% pruning intensity in February, whereas minimum number of flowers per tree (115.85) was noted in control in May. Sheikh and Hulman (1993) [16] studied the effect of severity of pruning (removal of the terminal 15 cm and 30 cm of the branches) on flowering and fruiting of guava cv. Navalur. They reported that pruning adversely affected flower production and reduced fruit yield/branch. Data observed with length of shoot showed that various pruning intensities influenced length of sprouted shoots significantly. The longest length of sprouted shoots (55.20 cm) was recorded with 50% pruning and shortest length of sprouted shoots (42.81 cm) was recorded with the control. The time of pruning significantly influenced length of sprouted shoots in guava. The maximum value (49.43 cm) was found with pruning in February and minimum was found pruning in May (47.35 cm). The interaction effect of pruning intensity and time of pruning for length of sprouted shoot was found significant. The maximum length of sprouted shoots (57.65 cm) was recorded with the 50% pruning intensity in February which was found significantly at par with 50% pruning intensity in May, whereas minimum length of sprouted shoots (42.15 cm) was noted in control (no pruning) in May. It is a well established fact that pruning alone at the right time and to the adequate extent improves the size, colour and quality of fruits by making more sun shine fall on the leaves, fruits and on a larger portion of the plant (Singh 2003). Suleman *et al.* (2006) [18] reported that the pruning at 60 cm resulted in minimum days (8.0) taken for sprouting of new shoots, maximum shoot length (74.0 and 78.0 cm) in rainy and winter season. The data obtained showed that various levels of pruning significantly affected the height of tree. Maximum height of tree (3.53 m) was recorded with the pruning intensity of 50% which was found significantly superior over other and minimum height of tree (2.21 m) was recorded with control. Time of pruning was also found to be influencing the height of tree. Maximum height of tree (3.03 m) was recorded with pruning in May which was significantly superior over others, whereas minimum height of tree (2.69 m) was found with pruning in February. The interaction effect of pruning intensity and time of pruning for height of tree was found to be non-significant. The maximum height of tree (3.87 m) was recorded with the 50% pruning intensity in May which was found significantly at par with 50% pruning intensity in February whereas minimum height of tree (2.20 m) was noted in control (no pruning) in May. In the present investigation it was observed that early pruning result in more plant growth vice versa late pruning decrease the shoot growth. Similarly, with increase in severity of pruning the height of tree decreased. Thus, more pruning delays the plant growth. Kumar and Rattanpal (2010) stated that this may be due to the fact that pruned trees were unable to make up the loss of growth caused by severe pruning in this short period. It is evident from the data that the various levels of pruning significantly affected the number of fruits per shoot. The maximum number of fruits per shoot (7.13) was recorded with the pruning intensity of 50% and minimum number of fruit per shoot (2.63) was recorded with control (no pruning). Time of pruning was also effective in influencing the number of fruits per shoot. Significantly maximum number of fruits per shoot (5.31) was recorded with pruning in May, whereas minimum number of fruits shoot (4.00) was found with pruning in February. The interaction effect of pruning intensity per and time of pruning for number of fruits per shoot was also found significant. The maximum number of fruits per shoot (8.00) was recorded with the 50% pruning

intensity in May which was found significantly at par with 50% pruning intensity in May, whereas minimum number of fruits per shoot (2.25) was noted in control (no pruning) in February. Jadhav *et al.* (2002) noticed that earliest emergence of shoot length, number of fruits per shoot on severely pruned (60 cm) trees of guava was found to be significantly more than mild pruned (30 cm) trees and control.

It is evident from the data that the number of fruits per tree was significantly influenced by different pruning levels. The maximum number of fruits per tree (141.19) was noted with pruning intensity of 50% and the minimum number of fruits per tree (120.65) was noted in control (no pruning). Time of pruning was also found significant regarding fruits per tree. The maximum number of fruits per tree (132.35) was recorded with the pruning in May, while minimum number of fruits per tree (125.84) was recorded with pruning in February. The interaction effect between pruning levels and pruning time on number of fruits per tree was found significant. The maximum number of fruits per tree (149.36) was noted with pruning intensity of 50% in May. The minimum number of fruits per tree (117.73) was recorded with control (no pruning) in February. Mishra and Pathak (1998) [13] reported the effect of shoot pruning on crop regulation in guava. Shoots were pruned at 25%, 50% and 75% intensity at monthly intervals between March and June. For the winter crop, 50% pruning in May produced the highest fruit yield (25.8 kg/tree). Dubey *et al.* (2001) [6] reported that the longest shoot length and number of shoots that emerged after pruning were obtained with 100 and 25% pruning intensities. Shoot number decreased with increasing pruning intensity. Flowers drop was found maximum with 100% pruning intensity. Fruit set percentage was highest (75%) in control plants, while the lowest was obtained with 100% pruning intensity.

3.2. Physical character

Data gathered on fruit weight revealed that pruning level was found significant with fruit weight. The maximum fruit weight (189.14 gm) was noted with 50% pruning and minimum fruit weight (142.99 gm) was noted in control (no pruning). Pruning time was also significantly influenced the fruit weight. The maximum fruit weight (169.61 gm) was measured with the pruning in May, whereas minimum fruit weight (160.28 gm) was recorded with pruning in February. The interaction between pruning levels and pruning time with respect to fruit weight was also found significant. The maximum fruit weight (205.00 gm) was recorded with 50% pruning in May and minimum (142.48 gm) was measured with control (no pruning) in February. Dalal *et al.* (2004) [5] reported that fruit yield decreased with increasing pruning intensity during 1998-99 and 1999-2000. In 2000-01, the highest fruit yield (number and weight of fruits) was observed under medium pruning (462.90 and 64.92 gram, respectively). In 1998-99, 1999-2000 and 2000-01 cumulative fruit yield was higher in medium pruning (118.18 kg) than light and heavy pruning. It is clear from the data presented that pruning levels were found significant with respect to fruit length. The maximum fruit length (11.57 cm) was recorded with 50% pruning and minimum (6.67 cm) found in control (no pruning). The pruning time was non-significant related to fruit length however maximum fruit length (9.10 cm) was recorded with pruning in May and minimum (8.42 cm) with pruning in February. The interaction between pruning levels and pruning time with respect to fruit length was found significant. The maximum fruit length (13.01 cm) was recorded with 50% pruning intensity in May, whereas minimum fruit length (6.03 cm) was in control (no pruning) in February. Similar results were found to Sundararajan and Muthuswamy (1966) [19], where they reported that pruning by removing 10-15 cm of the terminal portion of shoots of the past season growth of the guava varieties Nagpur Seedless and Smooth Green, resulted in marked increase in fruit size and weight. The fruit volume was significantly influenced by pruning levels and the data recorded on the attribute have been revealed that maximum fruit volume (251.77 ml) was recorded with pruning intensity of 50% which was found at par with 30% pruning whereas minimum fruit volume (188.42 ml) was recorded with control (no pruning). Pruning time also significantly influenced the fruit volume. The maximum fruit volume (220.59 ml) was recorded with pruning in May, while minimum fruit volume (208.95 ml) was recorded with pruning in February. The interaction effect of pruning levels and pruning time in terms of fruit volume was found non-significant. The maximum fruit volume (256.95 ml) was recorded with pruning intensity of 50% in May, whereas minimum fruit volume (184.03 ml) was recorded with control (no pruning) in February. In guava trees, Sahar and Hameed reported that pruning at 20 cm gave highest fruit volume in both seasons. Regarding to date, pruning in the month of May gave highest significant values in both seasons. The interaction between two factors, pruning at 20 cm with May and June pruning season gave highest significant values in first season, while pruning at 20 cm in May pruning season gave highest significant value in second season.

3.3 Yield character

It is clear from the data that pruning intensity significantly influenced the fruit yield per tree. The maximum fruit yield per tree (26.80 kg) was recorded with pruning intensity of 50% and minimum fruit yield per tree (17.34 kg) was recorded with control (no pruning). Pruning time significantly influenced the fruit yield per tree. The maximum fruit yield (22.69 kg) was recorded with pruning in May and minimum fruit yield per tree (20.25 kg) was noted with pruning in February. The interaction between pruning levels and pruning time on fruit yield per plant was found significant. The maximum fruit yield per tree (30.56 kg) was recorded with pruning intensity of 50% in May and minimum fruit yield per tree (16.84 kg) was noted with control (no pruning) in February. The variation in time of pruning have significant affected the fruit yield (q/ha). The maximum fruit yield (297.81 q/ha) was recorded with pruning intensity of 50% and minimum fruit yield (202.85 q/ha) was recorded with control (no pruning). Pruning time significantly influenced the fruit yield. The maximum fruit yield (252.15 q/ha) was recorded with pruning in May and minimum fruit yield quintal per hectare (230.9 q/ha) was found with pruning in February. The interaction between pruning levels and pruning time related to fruit yield was found significant. The maximum fruit yield (339.55 q/ha) was recorded with pruning intensity of 50% in May and minimum fruit yield (198.29 q/ha) was noted with control (no pruning) in May. Similar results found by Meena *et al.* (2016) [12] revealed that pruning at 45 cm shoot length in May also caused early shoot emergence, early flowering, more canopy spreading and heavy fruiting (52.91 kg/plant, 14.71 t/ha) than the normal fruiting in control (22.84 kg/plant, 6.35 t/ha). Therefore, it was recommended that 45 cm shoot pruning in May would be the best for good off season production of guava.

3.4 Chemical characters

It can be observed with the data that pruning intensity had significant effect on TSS. The maximum total soluble solids (17.90 ˚Brix) was noted with 50% pruning intensity and minimum TSS (14.96 ˚Brix) was found with control (no pruning). Pruning time has significant effect on soluble solids content of guava fruit. The maximum total soluble solids (17.90 ˚Brix) were measured with the pruning in May. The minimum total soluble solids (16.02 ˚Brix) were recorded with pruning in February. The interaction between pruning levels and pruning time with respect to total soluble solids was found non-significant. The maximum total soluble solids (19.17 ˚Brix) were noted with the 50% pruning intensity in May. The minimum total soluble solids (14.92 ˚Brix) were recorded with control (no pruning) in February. Increase in TSS might be due to the pruned plants had relatively higher leaves/fruit ratio as compared to the unpruned plants, which might have contributed for increased TSS concentration due to more metabolite's synthesis Adhikari and Kandel (2015) [1]. Hiwale and Raturi (1993) [8] reported that increase the TSS may be due to increased severity of the pruning which result into a more open tree canopy and this allowing more light and less competition for the growth of individual fruit compared to unpruned plants. These results are in agreement with the findings of Bajwa *et al.* (1986) [2] in ber. Chandra and Govind (1995) [3] found that severe pruning (75%) resulted in the higher value of TSS (10.9%) in guava *cv*. L-49 in the first year but fruits from control trees recorded the higher TSS (10.4%) followed by 50 per cent pruning treatment (10%) in the following year. Trees receiving 30 cm pruning level produced fruits with the highest TSS content i.e. 10.19 per cent and 11.14 per cent in rainy and winter season, respectively over the other treatments. It is evident from the observed data indicated that pruning intensity has significant influence on reducing sugar. The maximum reducing sugar (5.46%) was recorded with 50% pruning intensity and minimum reducing sugar (4.67%) with control (no pruning). The maximum reducing sugar (5.09%) was recorded with pruning in May and minimum reducing sugar (4.96%) was recorded with pruning in February. The interaction effect of pruning intensity and pruning time on reducing sugar was found non-significant. The maximum reducing sugar (5.53%) was recorded with 50% pruning intensity in May and minimum reducing sugar (4.65%) was recorded with control (no pruning) in February. It is obvious that pruning intensity influenced the content of non-reducing sugar in guava fruits. The maximum non-reducing sugar content (2.31%) was noted under pruning intensity of 50% which was found at par with 30% pruning and minimum non reducing-sugar (1.96%) was recorded with control (no pruning). Pruning time has non-significant influence on the non-reducing sugar content of guava fruit. The maximum non-reducing sugar (2.13%) was recorded with pruning in May and minimum non-reducing sugar (2.11%) was recorded with pruning in February. The interaction between pruning intensity and pruning time was found non-significant with respect to non-reducing sugar content of guava fruits. The maximum non-reducing sugar (2.32%) was recorded with 50% pruning intensity in May and minimum non-reducing sugar (1.94%) was recorded with control (no pruning) in May. The data revealed that total sugars were significantly influenced by pruning intensity in guava. The maximum total sugars (7.78%) were noted under pruning intensity of 50% and minimum total sugars (6.63%) were recorded with control (no pruning). Pruning time showed non-significant effect on total sugars. The maximum total sugars (7.22%) were recorded with pruning in May and minimum total sugars (7.07%) were recorded with pruning in February. The interaction between pruning intensity and pruning time in terms of total sugars was found non-significant. The maximum total sugars (7.85%) were recorded with 50% pruning intensity in May and minimum total sugars (6.55%) were recorded with control (no pruning) in May. Jayswal *et al.* (2017) [9] conducted an experiment to study the effect of different levels of pruning intensity in combination with different sources of nutrients, on the quality of guava fruits. The treatments applied were unpruned, pruning at 20 cm from shoot apex and pruning at 40 cm from shoot apex. The pruning was done during the month of May with the application of different sources of nutrients (organic, inorganic and bio-fertilizers). Highest TSS (10.96 ^{0}Brix), Total Sugars (8.07%), Reducing Sugar (4.68%) and Non-Reducing Sugar (3.39%) was recorded in pruning at 40 cm, while the minimum was observed in unpruned plants. Different sources of nutrition also affected fruit quality. Mahadevan *et al.* (2017) [11] reported highest total sugars (8.89%) at 30 cm pruning with 125% fertigation for winter season crop in guava. Data regarding the acidity per cent in guava fruits revealed that acidity per cent of guava was found significant with pruning levels. The maximum acidity (0.25%) was noted under pruning intensity of 50% and minimum (0.21%) was recorded with control (no pruning). Pruning time had also significant effect on acidity of guava. The maximum acidity (0.23%) was recorded with pruning in May and minimum acidity (0.22%) was recorded with pruning in February. The interaction effect between pruning intensity and pruning time was noted non-significant with respect to acidity. The maximum acidity (0.25%) was recorded with 50% pruning in May and minimum acidity (0.21%) was recorded with pruning in February. Similar results reveled by Data regarding the acidity per cent in guava fruits revealed that acidity per cent of guava was found significant with pruning levels.

The maximum acidity (0.25%) was noted under pruning intensity of 50% and minimum (0.21%) was recorded with control (no pruning). Pruning time had also significant effect on acidity of guava. The maximum acidity (0.23%) was recorded with pruning in May and minimum acidity (0.22%) was recorded with pruning in February. The interaction effect between pruning intensity and pruning time was noted non-significant with respect to acidity. The maximum acidity (0.25%) was recorded with 50% pruning in May and minimum acidity (0.21%) was recorded with pruning in February. Sahay and Singh revealed that least acidity (0.24% in rainy and 0.36% in winter season) was measured from the fruits subjected to 50 per cent of pruning during both the seasons, whereas, maximum acid (0.36 and 0.49%) content was recorded in fruits from control tree in both rainy and winter season crops. Dubey *et al.* (2001) [6] also obtained higher acid content (0.37% and 0.53% in rainy and winter season, respectively) in fruit of guava cv. Allahabad Safeda under control and lowest (0.33% and 0.50% in rainy and winter season, respectively) in 75 percent pruning level of May.

Table 1: Show the treatment of length of sprouted and height and plant

Treatment	No of flowers per plant	Length of sprouted shoot	Height of plant	Number of fruit per shoot	Number of fruit per plant	Fruit weight	Fruit length	Fruit volume
Month of pruning								
M_1	204.04	49.43	2.69	4.00	125.84	160.28	8.42	208.95
M_2	183.64	47.35	3.03	5.30	132.35	169.61	9.10	220.59
SE(m)±	3.945	0.320	0.090	0.091	1.622	4.139	0.390	5.319
CD(0.05)	8.203	0.666	0.187	0.190	3.374	8.608	NS	11.061
Intensity of pruning								
P_1	121.88	42.81	2.21	2.63	120.65	142.99	6.67	188.42
P_2	168.52	46.28	2.59	3.63	125.84	159.86	7.63	201.06
P_3	205.61	49.28	3.10	5.25	128.69	167.78	9.16	217.82
P_4	279.35	55.20	3.53	7.13	141.19	189.14	11.57	251.77
SE(m)±	5.578	0.453	0.127	0.129	2.294	5.854	0.552	7.522
CD(0.05)	11.601	0.942	0.265	0.269	4.771	12.174	1.148	15.642
Interaction (M x P)								
M_1P_0	127.91	43.47	2.21	2.25	117.73	142.48	6.03	184.03
M_1P_{20}	174.35	46.82	2.51	3.25	124.40	157.47	7.97	198.57
M_1P_{30}	211.47	49.78	2.86	4.25	128.20	166.88	9.53	206.61
M_1P_{50}	302.42	57.65	3.19	6.25	133.03	173.29	10.14	246.59
M_2P_0	115.89	42.15	2.20	3.00	123.57	143.51	7.30	192.82
M_2P_{20}	162.68	45.74	2.68	4.00	127.28	161.24	7.28	203.55
M_2P_{30}	199.76	48.78	3.35	6.25	129.17	168.68	8.80	229.03
M_2P_{50}	256.28	52.75	3.87	8.00	149.36	205.00	13.01	256.95
SE(m)±	7.889	0.641	0.180	0.183	3.245	8.279	0.781	10.637
CD(0.05)	16.406	1.332	NS	0.381	6.747	17.217	1.624	NS

Table 2: Show the treatment of fruit and reducing sugar and non-reducing sugar

Treatment	Fruit yield (kg/plant)	Fruit yield (q/ha)	TSS	Reducing sugar	Non-Reducing sugar	Total sugar	Titrable acidity
Month of pruning							
M_1	20.25	230.09	16.02	4.96	2.11	7.07	0.22
M_2	22.69	252.15	17.90	5.09	2.13	7.22	0.23
SE(m)±	0.562	6.599	0.378	0.061	0.035	0.084	0.004
CD(0.05)	1.169	13.723	0.787	0.127	NS	NS	0.009
Intensity of pruning							
P_1	17.34	202.85	14.96	4.67	1.96	6.63	0.21
P_2	20.15	223.86	16.23	4.86	2.06	6.91	0.22
P_3	21.60	239.96	16.69	5.12	2.14	7.26	0.23
P4	26.80	297.81	17.90	5.46	2.31	7.78	0.25
SE(m)±	0.795	9.332	0.535	0.086	0.049	0.119	0.006
CD(0.05)	1.653	19.407	1.113	0.180	0.102	0.248	0.013
Interaction (M x P)							
M_1P_0	16.84	207.41	14.92	4.65	1.99	6.64	0.21
M_1P_{20}	19.73	219.25	16.06	4.75	2.02	6.77	0.21
M_1P_{30}	21.39	237.64	16.46	5.05	2.12	7.17	0.22
M_1P_{50}	23.05	256.06	16.63	5.40	2.31	7.71	0.25
M_2P_0	17.85	198.29	15.00	4.69	1.94	6.62	0.22
M_2P_{20}	20.56	228.46	16.40	4.96	2.09	7.05	0.23
M_2P_{30}	21.81	242.29	16.92	5.19	2.16	7.35	0.24
M_2P_{50}	30.56	339.55	19.17	5.53	2.32	7.85	0.25
SE(m)±	1.124	13.197	0.757	0.112	0.069	0.169	0.009
CD(0.05)	2.337	27.445	NS	NS	NS	NS	NS

4. Conclusion

Based on the whole investigation, it can be concluded that there was significant effect of pruning height and time on growth, yield and quality of guava. Pruning height (50%) and pruning time M_2 (mid-May pruning) and there combination may be recommended for getting higher fruit yield of guava per unit area with much differences in quality and fruits.

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