6.1 Summary

Pomegranate is an important fruit crop of arid region. The standard practice of pruning and crop load are lacking and there is a no proper farm business data on its cost of production. With a view to standardize of these practice and to get an accurate figure on cost of cultivation of pomegranate, a field trail was conducted in pomegranate orchard of the Junagadh farmer which is nearer to the Junagadh Agricultural University, Junagadh. There were totally 7 treatments (2 main pruning treatments with 3 sub crop load treatments) which were replicated 4 times. To “Standardization of severity of pruning and crop load on yield and quality in pomegranate (Punica granatum L.) var. Bhagwa”.

The data obtained from the experiment subject to statistical analysis are summarized here under.

6.1.1 Growth parameters

6.1.1.1 Pruning and crop load treatments were found to influence most of the growth attributes significantly. The maximum plant height was recorded in treatment T_2 (15 cm pruning + 40 fruit retained per plant) in both the year as well as in pooled. The minimum plant height was recorded in treatment T_5 (30 cm pruning + 40 fruit retained per plant) during both the years and in pooled.

6.1.1.2 The maximum number of shoots/branch was recorded in treatment T_2 (15 cm pruning + 40 fruit retained per plant) and minimum number of shoots/branch was recorded in treatment T_7 (control) during both the years and in pooled.

6.1.1.3 The maximum length of shoot (cm) at 75 DAP was recorded in treatment T_2 (15 cm pruning + 40 fruit retained per plant) and minimum length of shoot (cm) was recorded in treatment T_7 (control) during both the years and in pooled. In case of length of shoot (cm) in 150 DAP was found non significant in both year while maximum in treatment T_2 (15 cm pruning + 40 fruit
retained per plant) and minimum length of shoot (cm) was recorded in treatment T\(_7\) (control) in pooled.

6.1.1.4 The maximum leaf area (cm\(^2\)) was recorded in treatment T\(_6\) (30 cm pruning + 50 fruit retained per plant) and minimum leaf area (cm\(^2\)) was recorded in treatment T\(_7\) (control) also during both the years and in pooled.

6.1.2 Flowering parameters

6.1.2.1 The maximum number of flowers/shoot was recorded in treatment T\(_6\) (30 cm pruning + 50 fruit retained per plant) and minimum number of flowers/shoot was recorded in treatment T\(_7\) (control) during both the years as well as in pooled.

6.1.2.2 The minimum number of male flowers/shoot was recorded in treatment T\(_6\) (30 cm pruning + 50 fruit retained per plant) and maximum number of male flowers/shoot was recorded in treatment T\(_7\) (control) during both the years as well as in pooled. While in hermaphrodite flowers/shoot was recorded maximum in treatment T\(_6\) (30 cm pruning + 50 fruit retained per plant) and minimum number of hermaphrodite flowers/shoot was recorded in treatment T\(_7\) (control) during both the years as well as in pooled.

6.1.3 Quality parameters

6.1.3.1 The maximum fruit diameter (cm) was recorded in treatment T\(_4\) (30 cm pruning + 30 fruit retained per plant) and minimum fruit diameter was recorded in treatment T\(_7\) (control) during both the years as well as in pooled.

6.1.3.2 The maximum fruit weight (gm) was recorded in treatment T\(_4\) (30 cm pruning + 30 fruit retained per plant) and minimum fruit weight was recorded in treatment T\(_7\) (control) during both the years as well as in pooled.

6.1.3.3 The maximum hundred aril weight (gm) was recorded in treatment T\(_4\) (30 cm pruning + 30 fruit retained per plant) and minimum hundred aril weight (gm) was recorded in treatment T\(_7\) (control) during both the years as well as in pooled.
6.1.3.4 The minimum thickness of fruit rind (mm) was recorded in treatment T₂ (15 cm pruning + 40 fruit retained per plant) and maximum thickness of fruit rind (mm) was recorded in treatment T₇ (control) during both the years and in pooled.

6.1.3.5 The minimum fruit rind percentage was recorded in treatment T₂ (15 cm pruning + 40 fruit retained per plant) and maximum fruit rind percentage was recorded in treatment T₇ (control) during both the years and in pooled.

6.1.3.6 The maximum juice percentage was recorded in treatment T₄ (30 cm pruning + 30 fruit retained per plant) and minimum juice percentage was recorded in treatment T₇ (control) during both the years as well as in pooled.

6.1.4 Physical parameters

6.1.4.1 The maximum fruits set percentage was recorded in treatment T₆ (30 cm pruning + 50 fruit retained per plant) and minimum fruits set percentage was recorded in treatment T₇ (control) during both the years as well as in pooled.

6.1.4.2 The fruits drop percentage/plant was found non-significant in both the years. While minimum fruits drop percentage/plant in treatment T₆ (30 cm pruning + 50 fruit retained per plant) and maximum fruits drop percentage/plant in treatment T₇ (control) in pooled.

6.1.4.3 The days to maturity was found non-significant in both the years as well as in pooled.

6.1.4.4 The fruit cracking percentage/plant was found non-significant in both the years, while minimum fruit cracking percentage/plant in treatment T₄ (30 cm pruning + 30 fruit retained per plant) and maximum fruit cracking percentage/plant in treatment T₇ (control) in pooled.

6.1.4.5 The damage fruit percentage by bacterial blight was found non-significant in both the years, while minimum damage fruit percentage by bacterial blight in treatment T₄ (30 cm pruning + 30 fruit retained per plant) and maximum damage fruit percentage by bacterial blight in treatment T₇ (control) in pooled.
6.1.4.6 The damage fruit percentage by annar caterpillar was found non-significant in both the years, while minimum damage fruit percentage by annar caterpillar in treatment T4 (30 cm pruning + 30 fruit retained per plant) and maximum damage fruit percentage in treatment T7 (control) in pooled.

6.1.5 Yield parameters

6.1.5.1 The maximum fruit yield/plant (kg) was recorded in treatment T6 (30 cm pruning + 50 fruit retained per plant) and minimum fruit yield/plant (kg) was recorded in treatment T1 (15 cm pruning + 30 fruit retained per plant) during both the years and in pooled.

6.1.5.2 The maximum fruit yield (t/ha) was recorded in treatment T6 (30 cm pruning + 50 fruit retained per plant) and minimum fruit yield (t/ha) was recorded in treatment T1 (15 cm pruning + 30 fruit retained per plant) during both the years and in pooled.

6.1.6 Bio-chemical parameters

6.1.6.1 The maximum TSS (°brix) was recorded in treatment T4 (30 cm pruning + 30 fruit retained per plant) and minimum TSS (°brix) was recorded in treatment T7 (control) during both the years and in pooled.

6.1.6.2 The minimum titrable acidity (%) was recorded in treatment T4 (30 cm pruning + 30 fruit retained per plant) and maximum titrable acidity (%) was recorded in treatment T7 (control) during both the years and in pooled.

6.1.6.3 The maximum TSS/Acidity ratio was recorded in treatment T4 (30 cm pruning + 30 fruit retained per plant) and minimum TSS/Acidity ratio was recorded in treatment T7 (control) during both the years and in pooled.

6.1.6.4 The maximum reducing sugar (%) was recorded in treatment T4 (30 cm pruning + 30 fruit retained per plant) and minimum reducing sugar (%) was recorded in treatment T7 (control) during both the years and in pooled.

6.1.6.5 The maximum total sugar (%) was recorded in treatment T4 (30 cm pruning + 30 fruit retained per plant) and minimum total sugar (%) was recorded in treatment T7 (control) during both the years and in pooled.
6.1.6.6 The ascorbic acid (mg/100 g) was found non-significant in both the years as well as in pooled.

6.1.7 Economics

As the economics was considered, it was clear that highest net return was recorded with the $T_6$ (30 cm pruning + 50 fruit retained per plant) and this treatment found to be most economical based on CBR, while minimum net return and CBR was noted in $T_7$ (control).

6.2 Conclusion

Based on the result of the two years experiment, it could be concluded that the treatment $T_2$ (15 cm pruning + 40 fruit retained per plant) was increased the growth characters and given maximum plant height (m), maximum number of shoot/branch, maximum length of shoot (cm) at 75 DAP and 150 DAP. It was also given minimum thickness of fruit rind (mm), minimum fruit rind percentage. Treatment $T_4$ (30 cm pruning + 30 fruit retained per plant) performed well for maximum fruit diameter (cm), maximum fruit weight (g), maximum hundred aril weight (g), maximum juice percentage (%), minimum fruit cracking percentage/plant, minimum fruit damage percentage by bacterial blight/plant, minimum fruit damage percentage by annar caterpillar/plant but also in case of bio-chemical parameters, i.e. maximum TSS ($^\circ$Brix), minimum titrable acidity (%), maximum TSS/Acidity ratio, maximum reducing sugar (%) and maximum total sugar (%) was found with treatment $T_4$ (30 cm pruning + 30 fruit retained per plant). The treatment $T_6$ (30 cm pruning + 50 fruit retained per plant) was given maximum leaf area (cm$^2$), maximum number of flowers/shoot, minimum number of male flowers/shoot, maximum number of hermaphrodite flowers/shoot, maximum fruit set percentage/plant, minimum fruit drop percentage/plant (%), maximum fruit yield/plant (kg) and fruit yield (t/ha). From the economic point of view, the maximum net return along with maximum CBR was noted in pomegranate var. ‘Bhagwa’ with treatment $T_6$ (30 cm pruning + 50 fruit retained per plant).