CONCLUSION

In the Light of present investigation it may be concluded that:

Maximum seed yield of mustard was recorded under treatment module of 100% NPK+10t FYM = 25 Kg S ha\(^{-1}\) closely followed by 100% NPK+10t Kg S ha\(^{-1}\) increase of 36.38%, 27.46% additional seed yield over 100% NPK twenty five percent inorganic fertilizer can be saved by use of either 10t FYM of 1 kg B ha\(^{-1}\) without deterioration in yield of mustard. Oil content increased significantly in all nutrients consisting either S of FYM at both fertility levels (50% NPK, 100% NPK. Reduction in fertilizer dose of NPK did not decrease the oil content of mustard seed. Highest protein content in seeds was estimated with treatment combination of 100% NPK+10t FYM+25 Kg S ha\(^{-1}\) which was at par with all treatments modules having sulphur or FYM except at 50% NPK level B did not reflect protein content significantly at fertility levels.

Water holding capacity of soil increased significantly in all treatments consisting FYM at both fertility levels. Buildup of organic carbon content of soil was also significantly affected by the application of FYM at both optimal and suboptimal doses of NPK. Maximum improvement in water holding capacity and buildup of organic carbon content of soil was observed under treatment T\(_9\) having 100% NPK + 10t FYM+25 Kg S ha\(^{-1}\). Maximum reduction in bulk density was recorded in this treatment (T\(_2\)). Significant reduction in bulk density was recorded in all treatments combinations consisting FYM at both fertility levels (100% NPK). Tremendous improvement in available N and P of soil was measured under all the plots treated with FYM, Maximum N availability was noticed under treatment T\(_9\) (100% NPK+10t FYM ha\(^{-1}\)) closely followed by T\(_{11}\) (100% NPK+10t
FYM+1KgB ha\(^{-1}\)). However maximum phosphorus availability was observed in treatment T\(_9\) closely followed by T\(_3\) (100% NPK+10t FYM ha\(^{-1}\)). Application of B and S either alone or along with FYM significantly improved their availability in soil. Application of FYM also significantly affected availability of S and B over 100% NPK.

Except treatment T\(_{10}\) (50% NPK+10t FYM+25 Kg sha\(^{-1}\)) application of FYM improved the total N and K content in soil. Similarly total phosphorus content of soil increased in all treatments over its initial status except in control plot. Total S and B content were significantly improved under plots treat with S or B either alone or along with FYM over their initial status.

Uptake of N, P and K was maximum in treatment module having 100% NPK + 10tFYM+ 25Kg s ha\(^{-1}\) followed by treatment T\(_{11}\) consisting 100% NPK+10t FYm+1GKGB ha\(^{-1}\) respectively. Removal of S was maximum in treatment T\(_9\) followed by treatment T\(_{10}\) (50% NPK+10t FYM+1 Kg s ha\(^{-1}\)) B uptake was highest under treatment T\(_{12}\) followed by T\(_{11}\) (100T NPK+ 10tFYM+1 Kg B ha\(^{-1}\)).

On the basis of results summarized above the specific conclusion are being warranted that treatment module of 100% NPK+10t FYM+25kg S ha\(^{-1}\) resulted in higher growth and yield of mustard. Soil a properties like organic carbon content, water holding capacity, bulk density, available and total content of N,P,K S and B were also improved to a great extent and cumulative net return was also more in this treatment.