Summary and conclusions
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1. Triacontanol applied @ 5 ppm proved to be the best and increased the height, number of leaves per plant, leaf area, root length and yield contributing factors and yield per hectar over the lower and higher concentrations except that of 9 ppm giving highest yield. The plants growing in light were better than that in shade.

2. The moisture content, total ash, fat, carbohydrates were decreased with the application of triacontanol. However, it has a beneficial effect on protein content and calories in the green gram plants. Besides, there was no significant difference between the plants grown in the light and shade conditions as far as the biochemical characters are concerned.

3. The beneficial effect was noted in respect of protein content and calories in the seed of green gram with the applications of triacontanol. However, the negative effect was found in moisture content, total ash and fat content.

4. All the concentrations of triacontanol significantly increased the growth in term of plant height, number of leaves and dry matter production after 54 days of sowing and 5 ppm concentration was found to be the best and also enhanced the maturity.

5. At 30 days and 56 days after sowing, the triacontanol treatment showed increased height root length and leaf area in all the colored lights over white light.

6. The yield contributing parameters and the final yield were significantly increased by all the colored light as compared to white light. The red light found to be the best followed by green, yellow and blue light at 5 ppm concentrations in various spectra.
7. There was no beneficial effect of various spectra of light on the biochemical content in leaves and seeds with respect of moisture, total ash, fat protein, carbohydrates and calories content.

8. All the growth regulators increased the growth and yield parameters and the final yield significantly over the control. All the regulators combined with triacontanol were found beneficial except that of IBA.

9. Triacontanol was superior when applied alone and in combination with other growth regulators except that of IBA.

10. 2,4-D combined with triacontanol showed fast proliferation, higher globular callus growth rate, more in length and breadth of the cells than that of 2,4-D alone.