

RESEARCH ARTICLE

Effect of seed coating on seed quality and yield of soybean [*Glycine max* (L.) Merrill]

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SUMMARY

An investigation on effect of seed coating on seed quality and yield of soybean [*Glycine max* (L.) Merrill] was conducted during Kharif 2018 at Instructional Farm, Department of Agriculture Botany, Vasantnao Naik Marathwada Agriculture University, Parbhani. The experiment was laid out in Randomized Block Design with three replications and seven treatments viz., T₁-Untreated seeds, T₂-Polymer coating, T₃-T₂+Vitavax, T₄-T₃+GA₃ 100ppm, T₅-T₃+CCC 100ppm, T₆-T₃+ NAA 50ppm, T₇- T₃+IAA 50ppm. The experiment was conducted to study effect of different seed coating treatments such as seed on quality and yield of soybean. From the present investigation it was observed that T₄ (T₃+GA₃) 100ppm followed by T₆- (T₃+ NAA50ppm) and T₇- (T₃+IAA) 50ppm, recorded higher seed quality and yield contributing traits. Mean days for 50 per cent flowering and mean days to harvest found non-significant. Treatment T₄- (T₃+GA₃ 100ppm) found superior in increasing plant height over treatment T₅- (T₃+CCC100ppm). In treatment T₄- (T₃+GA₃) 100ppm was found superior for number of branches, leaf area content, chlorophyll content, number of pods per plant, number of seed per pod. Yield per plot and per ha., test weight, harvest index followed by treatments T₆- (T₃+NAA50ppm) and T₇- (T₃+IAA 50ppm) than all other seed coating treatments over the control. Biochemical studies found that, oil content and protein content higher in T₇- (T₃+IAA50ppm) followed by treatments T₆- (T₃+NAA50ppm) and T₅- (T₃+CCC100ppm) than all other coating treatments over the control. Seed germination (%), seed moisture (%), plant total dry weight, was significantly in treatment T₄- (T₃+ GA₃100ppm) followed by treatments T₆- (T₃+ NAA50ppm) and T₇- (T₃+IAA50ppm) than all other seed coating treatments over the untreated seed.

Key Words : Seed quality, GA₃, Seed germination, IAA, Protein content

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