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RESEARCH ARTICLE

Growing degree days (GDD), heliothermal units (HTU) as influenced by sowing periods and varities in soybean

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SUMMARY

The field experiment was conducted at the department field to assess the crop weather relationship in different cultivars of soybean. The experiment was laid in split plot design, gross plot size was 5.4 m x 3.6 m and 4.5 m x 2.7 m net plot size, replicated thrice in which four sowing dates were imposed as a main treatments and six varieties were tested as sub plot treatment. The GDD was higher in D_2 (MW-28) *i.e.* 164.20C followed by D_3 (MW-29) than rest of the treatments, whereas the lowest GDD was recorded in D_4 (MW-30) *i.e.* 150.80C. Mean heat load was reported same in four varieties V_2 (MAUS-71), V_3 (MAUS-81), V_4 (MAUS-158) and V_6 (JS-9305) *i.e.* 160.90C, it may be due to same crop duration in above four varieties. Whereas, V_1 (MAUS-47) variety indicated less heat load than other variety *i.e.* 147.30C it may be due to small crop duration from emergence to maturity of such variety. Helio thermal units directly or indirectly affect the grain yield of soybean by delaying flowering and pod formation. The requirement of HTU was higher (925.0) in D_2 (MW-28), whereas HTU requirement was lower (825.8) in D_1 (MW-27) treatment. The mean helio thermal units was reported same in four varieties V_2 (MAUS-71), V_3 (MAUS-81), V_4 (MAUS-158) and V_6 (JS-9305) *i.e.* 915.0^{0}C. It may be due to the same crop duration in above four varieties. Whereas, lowest helio thermal unit was recorded in V_1 (MAUS-47) *i.e.* 823.5^{0}C.

Key Words : Growing degree days, Heliothermal units, Periods, Varities

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