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Effect of Different Sowing Dates on the Yield-related Traits and Seed Yield of Sesame

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[Introduction]

Sesame(*Sesamum indicum* L.) is typically temperature and day length sensitive plant indicating that it's flowering is promoting under high temperature and short day length condition. Yield potential of sesame depends on genetic factor, environmental factor, genetic x environmental interaction as well as agronomic factors such as sowing date, planting density or seed rate for sowing. The main aim of this study was to analyze the effects of different sowing dates on the yield-related traits and total seed weight of sesame. The main aim of this study was to analyze the effects of different sowing dates on the yield-related traits and total seed weight of sesame.

[Materials and Methods]

The experiment was conducted at Suwon from 2019 to 2020. Total seven sesame varieties, Ansan, Sungboon, Poongsung, DT45, 90days, Yangbaek and Arum were used as experiment materials. Different sowing date from April 20 to June 10 with 7 day interval were applied. General sesame cultivation methods were applied and surveyed agronomic characters and yield related characters. Statistical analysis was conducted Analysis of Variation(ANOVA), Fisher's least significant difference using SAS 9.2 software.

[Results and Discussion]

According to the experiment result, analysis of variance revealed that different sowing dates affected on the sesame yield-related traits such as plant height, number of branch per plant, number of capsule per plant, 1,000-seed weight, and total seed weight. As sowing date was delayed, yield-related traits were decreased mainly due to the shortage of vegetative growth period which affected to decrease total seed weight of sesame. In addition, earlier sowing was also caused to reduce total seed weight by low temperature condition, especially shortage of total effective temperature and hours of sunshine during sesame growing period. Early or late sowing date showed negative effect of yield-related sesame traits and total seed weight. Optimum sowing date for sesame in the middle region of Korean peninsula was May 10th in which average number of capsule per plant was 103 and total seed yield recorded 90 kg per 10 are.

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