Germination model of 'Namdo' Variety of Garlic with Temperature

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A model for estimating germination rate of garlic(var. Namdo) with temperature was made by chamber experiment. We checked emergence rate after planting garlic cloves with five constant temperature treatments of 10℃, 15℃, 20℃, 25℃ and 30℃. From 50% emergence days, we calculate representative germination rates for every temperature. The relationship of germination rate and temperature was elucidated by curve fitting with exponential type function. 13.23℃ was the optimum temperature for garlic germination. We could calculate germination rate for every day with daily mean temperature from the temperature-germination rate relationship. Total germination percentage could estimated from accumulating daily germination rate. We also make a excel program for calculation of garlic germination rate. Application result of the germination model to field condition also suggested and limitation of the model also discussed.

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