Thesis title	Relationship of Germination and Vigor Tests to Field Emergence and Storability in Seed of Five Soybean Cultivars
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ABSTRACT

Basically, Success in crop production is dependent on the ability of planting seeds to produce seedlings under field condition. The objectives of this research were to student quality of seed after accelerated aging and storage to examine the relationship of seed germination and vigor with field emergence and to combine tests to form a stepwise multiple regression model for prediction of field emergence soybean. Seeds of five soybean cultivars, CM 3, CM 4, CM 60, SJ 5 and ST 2, were exposed for 0 – 3 days to accelerated aging and then were tested for germination and vigor, and planted to evaluate for field emergence. Germination and vigor of seed with high initial quality showed less deterioration. Of all the vigor tests, field germination test, seedling growth rate and seedling length could perform the difference in seed quality more efficiency than standard germination. Most of the seed germination and vigor tests highly correlated with field emergence. Therefore of all the tests, standard germination, field germination, first count and speed of germination each would be a good vigor test for predicting field emergence of soybean. Improved prediction could be made by combining various seed vigor tests in stepwise multiple regression model. Based on the results of the analysis, it appeared that standard germination, first count, speed of germination, seedling growth rate and seedling length would be good seed vigor indices for prediction of field emergence.