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Longevity of Soybean Seeds Submitted to Different Mechanized Harvesting Conditions

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Abstract : Seed vigor is a fundamental component for the good performance of the entire soybean production process. Seeds with mechanical damage at harvest time will be more susceptible to fungal and insect attack during storage, which will invariably reduce their vigor to the field, compromising uniformity and final stand performance. Harvesters, even the most modern ones, when not properly regulated or operated, can cause irreversible damages to the seeds, compromising even their commercialization. Therefore, the control of an efficient harvest is necessary in order to guarantee a good quality final product. In this work, the damage caused by two different harvesters (one rented, and another one) was evaluated, traveling in two speeds (4 and 8 km / h). The design was completely randomized in 2 x 2 factorial, with four replications. To evaluate the physiological quality seed germination and vigor tests were carried out over a period of six months. A multivariate analysis of Principal Components (PCA) and clustering allowed us to verify that the leased machine had better performance in the incidence of immediate damages in the seeds, but after a storage period of 6 months the vigor of these seeds reduced more than own machine evidencing that such a machine would bring more damages to the seeds.

Keywords : Glycine max (L.), cluster analysis, PCA, vigor
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