and field emergence index. When accelerated aging was conducted at 45°C, differences in seed, seedling vigor and viability were soon detected. The percentage of abnomal seeofings was very low for both species.The parameters as rate of germination and germination percentage, seedling emergence and biomass incorporation may be used as vigor indices.Under more drastic conditions of aging, the field emergence index did not correlate with data recorded under laboratoy and field conditions. *T impetiginosa* seeds were more resistant to high levels of temperature and relative humidity.

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Priming of guava seed (*Psidium guajava* L.)

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The goal of this research was to evaluate the priming efficiency in guava seeds. Seeds were primed in water, for 48 hours, and in -0.8MPa PEG 8000 solution, for 120 hours and 336 hours, until they reached 22% water content. After priming, a sample of the seeds was dried until they reached the initial water (8.4%) content. The experiment consisted of seeds without any treatment (control), fresh primed seeds and dried primed seeds, with eight replicates of 25 seeds per replicate. Germination percentage and speed were evaluated daily, and seedling growth was evaluated using The Ohio State University's Seed Vigor Imaging System (SVIS-OSU). The results showed that the PEG primed fresh seeds had higher seedling growth, uniformity and germination speed. Furthermore, the germination percentage of primed fresh seeds was similar to the control. Drying the primed seeds partially reversed the priming benefits, as observed by a lower performance of dried primed seeds when compared to fresh primed seeds. However, when compared with the control, dried primed seeds showed a higher performance. In conclusion, priming of guava seeds is efficient to improve seed lot performance which allows a faster and more uniform germination.

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Mean germination time provides a repeatable vigour test for maize

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The Cold Test for maize, the most frequently used vigour test, is difficult to standardise and takes up to 14 days. In recent work, mean germination time (MGT), which is also the mean lag period to germination, assessed during germination in towels, was related to the rate of, and final, emergence and seedling size in unsterilised soil. In the present work, daily counts of germination were made on 7 lots from 5 cultivars in rolled towels at 13°C, twice in Aberdeen and once in both Copenhagen and Mashhad, Iran. In Mashhad, 6h counts were also made during germination at 20°C. The mean just germination time (MJGT) to the appearance of the radicle and MGT (time to 2mm radicle) were significantly related to shoot length after 14 days at 13°C and after 6 days at 20°C, slower germination (high MGT) leading to smaller seedlings. MJGT and MGT were also indicative of mean emergence time (MET) and field emergence in 2 sowings in Mashhad, and of performance in the cold test in Copenhagen. Physiological germination after 6 days at 13°C (2mm radicle) and 2.5 days at 20°C was also significantly related to emergence and cold test performance. The ranking of the lots in the five experiments was almost completely consistent. Vigour tests based on MGT (mean lag period) completed in 8 days at 13°C or 6 days at 20°C, or early counts at 13°C after 6 days at 13°C or 2.5 days at 20°C are suggested as repeatable vigour tests for maize.