

## **USE OF THE TETRAZOLIUM TEST FOR ESTIMATING SEED VIABILITY AND VIGOUR**

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### **Abstract**

The tetrazolium test relies on the activity of certain dehydrogenase enzymes and indirectly measures the respiration capability of the living tissues of the seeds. The initial objective of the test was to quickly determine seed viability. Later on, it focussed on estimating seed vigour and more recently in diagnosing the possible causes that contribute to reduce the physiological quality of seed lots, such as mechanical damage, weathering damage, and insect problems. Nowadays, the methodology of the tetrazolium test has been perfected for seed of several species, including agricultural, vegetable, horticultural, flower, tree and shrub species. Seed quality control is improved with the use of the tetrazolium test in all phases of seed production such as harvesting, receiving, before and after seed processing and drying, during storage and before sowing. The test can be applied even before harvesting the crop. The methods for determining vigour will be briefly presented for seeds of the following species: cotton; common bean; maize; soybean; wheat; sunflower; peanut; solanaceae; and tropical forage grass seeds. The utilization of tetrazolium results, as with any vigour test, can assist the categorization of vigour levels for different seed lots and for estimating the performance of these lots in the field under optimum and stressful conditions.