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QUICK TEST FOR VIABILITY AND VIGOUR IN SEEDS OF *CHLOROXYLON SWEITINIA* D. C.

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ABSTRACT : Tetrazolium test was used for viability and vigour in seeds of *Chloroxylon sweitinia* D. C. Results indicate that TZ test can be utilized for the accurate determination of viability with the help of topographical staining of embryo and cotyledons. Seeds are classified in seven categories for vigour and vigour rates. TZ test is recommended for quick test of viabililty and vigour in seeds of this species.

Key words : *Tetrazolium, viability, vigour, Chloroxylon sweitinia seeds.*

INTRODUCTION

With the increasing awareness of the environment, reclamation of dry, waste and deforested lands has been given due importance. Seeds of several economically important forest tree species for afforestation have been tested for raising large number of seedling in nurseries. For the quick test of viability of seeds, tetrazolium (TZ) was first introduced by Kuhn and Jerchel (1941). This method was further used by Lakon (1942) for the topographical evaluation of the viability of the seeds by staining the embryo. TTZ is an excellent indicator of reduction in biological materials. Red colour appeares when the TZ is reduced in living tissue whereas non-living tissue does not bring the reduction of TZ.

This method has gained popularity on account of its simplicity and rapidity. Its manifestation can be clearly recorded and interpreted. Several workers have used this method for seeds of vegetables, cereals and forest trees (Gopal and Thapliyal 1969; Agarwal *et al.* 1973, 1974; Agrawal and Kaur, 1975; Perry, 1981; Faila, 1981; Kandya and Babeley, 1984).

The present paper deals with the use of TZ test in the seeds of *Chloroxylon sweitinia* D. C., a very important forest tree species for reclamation of dry and waste lands due to its frost and drought resistant nature.

MATERIAL AND METHODS

Fruits of *Chloroxylon sweitinia* were collected from Ramna forest, Sagar forest division, M. P. during May, 1985. Seeds were extracted from pods and stored at room temperature in air tight glass bottles. Tests were performed during March 1986. Seeds (200) were imbibed in distilled water for 18 hours, cut into two halves and kept in replicates of 4 X 50 in 0.1% tetrazolium solution at pH 7.0 for 20 hours. Simultaniously 200 seeds were kept for germination on moistured filter paper in a 'SEW' seed germinator at 25 $\pm$ 2°C (ISTA, 1976).