PROPAGATION OF SAL *(SHOREA ROBUSTA)* BY SEED

POOJA YADAV[1] AND G.S.YADAV[2*]

[1]*Department of Genetics and Plant Breeding, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Krishak Nagar, Raipur 492012, Chhattisgarh, India.*

Email:pooja.putul@gmail.com

[2]*Puneet Sadan, Lokmanya Tilak Ward No.37, Khalepara, Kangoli, Dharampura No.2 Jagdalpur 494001, Dist. Bastar, Chhattisgarh, India*

**Corresponding author: yadavdrgs@gmail.com*

ABSTRACT: ***Shorea robusta*** **(sal) is one of the most important timber species and has high production potential in forest of Madhya Pradesh, Chhattisgarh and Jharkhand. The present investigation is an attempt to propagate sal by seed. The artificial regeneration of this species is difficult due to its short viability period, higher root shoot ratio and its sensitivity to moisture. Sal seeds directly plucked from the tree with 95 to 100% viability were used in the study during 2014 and 2015. Seedlings were raised in sand and watering was done with fine rose can. The mean weight of single seed with the five wings was 2.2472g and without it was wing 1.9632g. The seeds started germination after 48 hours of sowing. The germination was 38.95% after 62 hours of sowing. The mean germination per cent after 07 days of sowing was 45.90. The findings of the present investigation indicated that root-shoot length ratio has fairly decreased with the increasing age of seedlings. The slope of regression function rather remained positive. It means shoot weight increases with increase in root weight. The 'S' which is measured in the units of response variable represents the standard distance data values fall from the line of regression (S=0.1525) from the line of regression having rather a very low coefficient of determination to an extent of 15.95 %. Altogether 07 scattered points out of 10 adjudged close affinities with the line of regression in ascending trend and remaining 03 scattered points located abruptly on and around the best fitted line. Thus, these two associates grow independently. The root shoot ratio depends upon the growing medium and size of poly bags and pots. Any checks in the growth of roots and shoots deviates the ratio either by length or by weight. The present study inferred no difference between the root-shoot length ratio and root-shoot weight ratio adjudicates a fairly well growth without any check as barrior either in root growth or shoots growth. The predictor variable Root-Shoot length ratio has rather no control over the root-shoot weight ratio. The mean root-shoot length ratio (cm) and root- shoot weight ratio (g) were 0.48803 and 0.4579 respectively adjudicated homogeneity in the growth and development of seedlings. Thus, sal seeds can easily be propagated under intermittent mist conditions in sand.**

Key words: *Germination, seed collection, seed weight, sowing, seedlings production*

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