**ABSTRACT**

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| Title of the Thesis | **:** | Propagation of Mulberry (*Morus alba* L.)genotypesof Trans-Himalayan region by stem cuttings |
| Name of Student | **:** | Ishey Dolma |
| Registration No. | **:** | J-19-M-681 |
| Major Subject | **:** | Sericulture |
| Name and Designation of  Major Advisor | **:** | Dr. Magdeshwar Sharma  Professor |
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| Name of University | **:** | Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu |

**ABSTRACT**

The present investigation entitled “Propagation of Mulberry (*Morus alba* L*.*)Genotypesof Trans-Himalayan Region by Stem Cuttings” was carried out at Mulberry nursery of Division of Sericulture. Cuttings of three different genotypes namely White (Osay karpo), Red (Osay marpo) and Black (Osay nakpo) were collected from western Ladakh and were evaluated for propagation under sub-tropical conditions of Jammu division. Three genotype cuttings and check variety were dipped in three different concentrations *viz.*, 100 ppm, 200 ppm and 300 ppm of two growth regulators, Naphthalene acetic acid (NAA) and Indole-3-Butryic Acid (IBA). The cuttings after 24 hrs of treatment were planted in polybags. The results indicate that check variety sprout early at 51 days with maximum sprouting percentage (75.00 %) with IBA @300 ppm concentration followed by white, red and black genotype respectively.

The maximum leaf number (12.25) and leaf area (64.25 cm2) after 90 DAP was observed in the check variety at IBA 300 ppm. The shoot length was observed to be maximum (9.46 cm) and minimum (1.48 cm) after 90 DAP in the check variety and black genotype respectively. Significantly survival percentage (92.00%) was observed in the check variety at IBA 300 ppm concentration after 90 DAP. However, the rooting percentage, root length, root weight and root number were also observed best in check variety (C-2038) followed by (Osay karpo), (Osay marpo) and (Osay nakpo) at IBA 300 ppm respectively. The results proved that the interaction of mulberry genotypes with different concentrations of NAA and IBA, revealed that IBA at 300 ppm was found effective for all parameters of each genotype studied. However, check variety was observed to show the best results in all the parameters. This investigation proves the efficacy of growth regulator IBA at 300 ppm for mass propagation by stem cuttings to promote easy and faster multiplication in mulberry.

**Keywords:** Mulberry, genotype, Indole-3-butryic acid, Stem cutting, Trans- Himalayan