



RESEARCH PAPER

Integrated effect of mixed oil cake and FYM on raising of mulberry saplings and establishment of chawki garden for sustainable sericulture

R.L. Ram* and C. Maji¹

P4, Tasar Breeding Station, Central Silk Board, Chakradharpur, West Singhbhum (Jharkhand) India
(Email: ramlaxhanram08@gmail.com)

Abstract : A pilot study was conducted at Regional Sericultural Research Station, Kalimpong, West Bengal, India own research farm during the year 2012-17 with five treatments e.g. T₁: Control: FYM @ 10 mt ha⁻¹; T₂: FYM @ 10 mt ha⁻¹ + mixed oil cake @ 0.5 mt ha⁻¹; T₃: FYM @ 10 mt ha⁻¹ + mixed oil cake @ 0.75 mt ha⁻¹; T₄: FYM @ 10 mt ha⁻¹ + mixed oil cake @ 1.0 mt ha⁻¹ and T₅: FYM @ 10 mt ha⁻¹ + mixed oil cake @ 1.5 mt ha⁻¹ to study their integrated effect for raising of mulberry saplings and establishment of chawki garden. The mixed cake was applied through 'Spic Surabhi'. The main ingredient in Spic Surabhi was oil seed cake of *Neem*, groundnut, castor and sesame with turmeric powder and pungamia extracts. Based on the data analyzed, it has been observed that, the integrated effect of mixed oil cake and FYM was significant on survivability (%), root zone, growth attribute characters and leaf yield. The average height of 180 days old saplings was 159.95 cm with treatment combination T₅ followed by 156.35 cm with T₄ and 103.68 cm with T₁ (control). Maximum leaf yield was 6.5 mt ha⁻¹ in T₅ in spring season, 2016 followed by 6.4 mt ha⁻¹ in T₄ and 4.4 mt ha⁻¹ in T₁ (control). The total leaf yield gain was 47.7% in T₅ over control. In autumn season, maximum leaf yield was 5.1 mt ha⁻¹ T₅ followed by 4.9 mt ha⁻¹ in T₄ and 4.0 mt ha⁻¹ in T₁ (control). Total leaf yield was 27.5 per cent higher in autumn season with T₅ than control. In spring season, 2017, maximum leaf yield was 8.1 mt ha⁻¹ with T₅ followed by 8.0 mt ha⁻¹ with T₄ and 5.8 mt ha⁻¹ in T₁ (control). Total leaf yield gain in autumn, 2017 was 39.6 per cent higher in T₅ than control. To control the both primary and secondary infection of root rot, mixed oil cake containing *Neem* ingredients performed better, because, *Neem*, (*Azadirachta indica*), a native of arid zone of Indian sub-continent are well known for its nutritional and medicinal values worldwide.

Key Words : Mixed oil cake, Sericulture, Mulberry, Chawki garden, Silkworm

View Point Article : Ram, R.L. and Maji, C. (2020). Integrated effect of mixed oil cake and FYM on raising of mulberry saplings and establishment of chawki garden for sustainable sericulture. *Internat. J. agric. Sci.*, **16** (1) : 1-10, DOI:10.15740/HAS/IJAS/16.1/1-10. Copyright©2020: Hind Agri-Horticultural Society.

Article History : Received : 23.09.2019; Revised : 01.11.2019; Accepted : 02.12.2019

* Author for correspondence:

¹Regional Sericultural Research Station, Central Silk Board, Kalimpong (W.B.) India