*International Journal of Minor Fruits, Medicinal and Aromatic Plants. Vol. 5 (1) : 29-37, June 2019*

**Phenology and reproductive biology of three *Sesbania* species**

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*Received* : *04.11.18 ; Revised: 20.12.18 ; Accepted: 30.12.18*

**ABSTRACT**

*An experiment was conducted at Field and Plant Systematics Laboratories of the Department of Crop Botany, Bangladesh Agricultural University, Mymensingh, to study the phenology and to search for new descriptors from reproductive morphology for convenient field identification of Sesbania species. Seeds of one hundred and five accessions from three Sesbania species viz. S. bispinosa, S. cannabina and S. sesban, were collected and used as experimental materials. Seeds were sown at the spacing 50 cm (row–row) × 15 cm (plant–plant). Ratoon, the re- growth of shoot from previous year’s harvest, was observed only in S. sesban and also used as experimental material. Results revealed that the days required for 50% inflorescence bearing, flower & pod initiation and pod maturation were higher in S. sesban ratoon and lowest in S. sesban; S. sesban ratoon also produces the largest flowers and the smallest in S. bispinosa. Pollen grains are monad, tricolporate, prolate and exine sculpture reticulate. Pollen grains of S. bispinosa possess the thickest exine (2.47±0.47 µm) with the highest value of P/E ratio (1.81) and the lowest in S. cannabina (1.16±0.21 µm and 1.57, respectively). The highest pod setting was found in S. cannabina (50.35%) and the lowest S. sesban ratoon (21.68%). However, seed setting was higher in S. bispinosa (91.06%) and the lowest S. cannabina (87.78%). The heaviest 1000-seed weight was obtained from S. sesban (20.03±2.06 g) and the lowest from S. cannabina (16.28±2.20 g). A dichotomous key was made for the identification of these Sesbania species.*

***Keywords* :** *Sesbania* species, *S*. *sesban* ratoon, floral parts, color, length, width