

SEED PRODUCTION AND GERMINATION OF  
COSCINIUM FENESTRATUM COLEBR.  
(MENISPERMACEAE) IN RELATION TO ITS DOMESTICATION

M.A.B.D. Senarath, I.A.U.N. Gunatilleke,  
and C.V.S. Gunatilleke  
*Dept. of Botany, University of Peradeniya.*

Although stems of Coscinium Fenestratum, locally known as "Weniwelgate", heavily exploited from the wild, are widely used in indigenous medicine, its cultivation has hitherto received little attention. In this study some salient features related to its propagation have been investigated and reveal the following: i) The species is dioecious, thus seed production is limited to mature female plants. The ratio of male to female plants in two populations was 1:1 and 3:1. ii) Fruit production per plant varied between individuals and was found to be quite poor in most of them. In 1985/86 eleven individuals only produced 886 fruits; also equivalent to the seed crop as each fruit bears a single seed. Seed production was found to improve by 2½ times with hand pollination. iii) Of the four fruit predators, the polecat and fruit bat did not damage the seed and feed upon the fruit while it was still attached to the plant. The spiny rat and Indian porcupine on the other hand fed on the fallen fruit damaging the seeds as well. iv) Under natural conditions, the period of seed dormancy ranged between 60-318 days and germination was only 16-24%. Both the pericarp of the fruit and hard endocarp inhibited germination. Of the various mechanical, heat and chemical treatments attempted to overcome the latter, exposure to sun for six hours proved the most promising and this not only increased germination to 57% but also reduced the dormancy period of the first seeds to germinate by 20 days.

From these results it may be suggested that seed for cultivation should be obtained from the plant itself by bagging mature fruits before ripening, so as to collect as much seed as possible and minimize losses to predators. Removal of the pericarp and exposure of the seed to sunlight, both relatively easy treatments to implement, enhances germination, and therefore are advocated.

10th Dec. 1987 (Thursday) 09.15 a.m. - 09.30 a.m.