

### **Phenology and Control Pollination Studies in *Casuarina equisetifolia* Forst.**

By B. NAGARAJAN, A. NICODEMUS, V. SIVAKUMAR, A. K. MANDAL, G. KUMARAVELU, R. S. C. JAYARAJ, V. NARMATHA BAI and R. KAMALAKANNAN  
Silvae Genetica 55 (2006) 4/5, p. 149-155

#### **Abstract**

Studies on phenology, floral biology and seed production were conducted in two provenance trials and a clonal hedge orchard of *C. equisetifolia*. Observations in seventeen populations indicate that predominant dioecy with low proportion of monoecy as the commonest sexual strategy. Flowering occurs twice in a year coinciding with the South West and North East monsoons. *C. equisetifolia* exhibits strong anemophilous adaptations such as very high pollen output, reduced flowers with large stigmatic area and light weighing winged fruits. Pollen is viable up to 99%, storable in 4°C up to three months with no loss in fertility. Trees start reproducing within two years of planting. Local land races produce ten to twenty times higher seeds than the recent introduced natural provenances and exotic landraces. Controlled pollination resulted in lower seed set than observed in open pollination. Selfing leads to normal seed set in monoecious trees. Inter specific cross with *C. junguhuhniana* pollen parent results in viable progeny.

**Key words:** Anemophily, *Casuarina*, cone, landrace, phenology, provenance, pollination, reproduction, seed.