

**INTEGRATED APPROACH TO CONTROL THE WASTE LAND WEED**  
**Parthenium hysterophorus**

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Parthenium has spread throughout India in the last three decades and has assumed a dangerous proportion by reducing crop yields, eliminating other species by competition and causing health hazards to man and cattle.

The biological methods adopted in Karnataka, India, involve propagating the plant species Cassia sericea (CS) in the Parthenium infested areas through sowing of seeds and release of insect predator Zygogramma bicolorata (ZB) a specific leaf feeding beetle. The plant CS - a leguminous annual shrub is gradually replacing Parthenium in many parts of Karnataka. The field and laboratory studies have established the presence of allelopathic compounds in this plant, which, on accumulation in soil, inhibit the germination and growth of parthenium seed. Besides, parts of this plant like stem, leaf and seed are of economic importance. The beetle ZB has build up impressive population and is showing great promise but the beetle has to be in the soil for quite sometime from November till the commencement of rains (June). A recent biological survey across the country and laboratory studies have revealed that protecting the natural habitat from being disturbed offers significant resistance to the entry of parthenium weed. A number of plant species have been graded based on degree of resistance offered to parthenium invasion and strong natural agents have been identified. Hand pulling and herbicide application to a limited extent is inevitable to supplement other methods in the suppression of the weed. Situations wherein individual methods are effective have been described for field practice. A concerted integrated management approach by public, private and voluntary agencies can suppress parthenium growth to a safe level.