

## Biological Control of Parthenium (Congress Grass) by *Cassia Uniflora*

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### Abstract

*Partheniumhysterophorous* is a flowering plant belongs to the family Asteraceae. It is native of American tropics common name include Santa Maria Santa Maria feverfew white top weed, famine weed. In India it is commonly called as Carrot grass or Gajarghass. It is Poisonous species due to which allergic asthma, itching and different type of ailments occurs in human beings. In the present paper biological control of parthenium by cassia species has been observed in all parts of Plant..

### Introduction

*Partheniumhysterophorousis* anxious weed in America, Asia, and Australia. This weed is considered to be a cause of allergic respiratory problems. Contact dermatitis disease producing species in human and livestock crop yield is also reduced owing to its allelopathy. Its aggressive dominant of this weed threatens biodiversity.

It is annual herbaceous weed with no economic importance unrivalled till now. This erect ephemeral herb known for its vigorous growth and high fecundity especially in warmer climate is a nature of North East Mexico and is endemic in America producing thousand of small white Capitola each yielding fine seeds on reaching maturity within the past century it has found its way to Africa, Australia, Asia and Pacific Island has now become one of the worlds seven most devastating and hazardous weeds.

This noxious weed is often spotted on abandoned lands, developing residential colonies around the towns railway tracks road drainage and irrigation canals etc. This grass grows luxuriantly in established gardens plantations and vegetable crops due to its high fecundity a single plant can produce 10,000 to 15000 viable seeds and these seeds can disperse and germinate to cover large areas.

### Material and Method

The study has been taken to the south to the Beed city in order to assess the status of plant growth along morphological changes due to shadow keen observation are made under monsoon season we investigate the effect of plant shadow on *Partheniumhysterophorous*.

### Result and Discussion

It includes the use of living organism for suppressing or controlling the weeds. Plants animals or microorganisms may be used for destruction of weeds. These are called bio agents which feeds on only the weeds and not on crop plants. E.g. prickly pear nagphana weed in south India was controlled by conchinealinsects (*Dactiopioustomentorus*). In Austria(Hawaii Island) several kind of moths were used to control lantana camara which eats the flower and fruits.

This method is very efficient and economical provided right type of predators parasites or pathogens which even under starvation condition will not feed upon cultivated crops are found out and introduced.

There are several options available for controlling any given weed situations long term control of weed invasive plant species is achieved by utilizing a range of common weeds troublesome because they have biological characteristics which enable them persists and spread in a particular environment their various mechanism for dispersal allow them to spread rapidly from farm to farm so that control of common weeds must be dealt with a part of everyday operations. Good farmers control weeds outbreaks before they seed and thereby reduce future problems.

We first tested whether native shrubs seedlings were able to grown in experiments area. We found that native shrubs are dominant over the *Partheniumhysterophorous*, Rajmanek M.2000.

We then conducted additional experiments to confirm that cassia species dominant over *Partheniumhysterophorous*

In addition growth of the invasive plants, seedlings was the lowest in soils. Keane R M., Crawl M J (2002).

The native plants confirming thatto reduce invasive plants performance by interfering with the formation of association. Mooney HA, Hobbs RJ (2000).

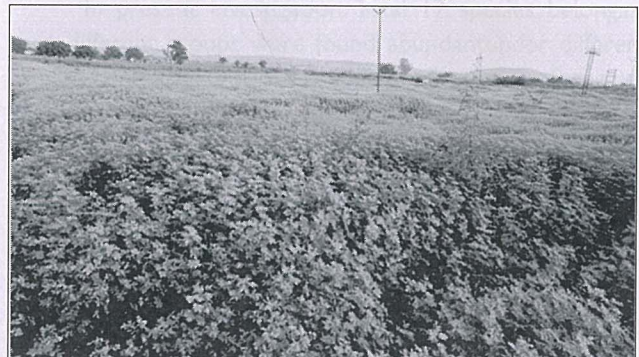


Figure 1. Cassia species in natural Habitat

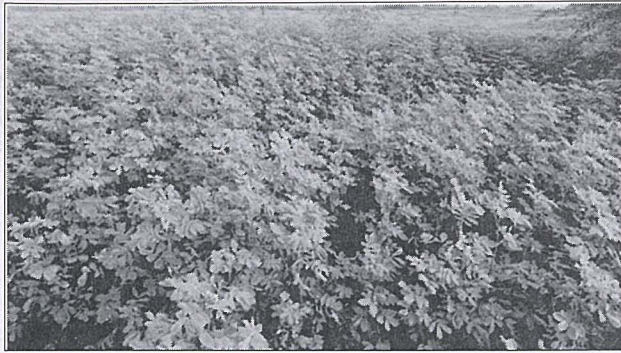


Figure 2. Cassia species in Flowering



Figure 3. Cassia species Disrupting the canopy of Parthenium hysterophorus

Conclusion: Our results reveal a novel mechanism by which native shrubs can disrupt the canopy of invasive plant species. It is currently unclear precisely which phytochemicals produced by native plants and how they interact with other species.

Further research in these directions is needed for better understanding the effects of native shrubs on this invader and natural ecosystem.

### References

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