

Weed found to check parthenium

BANGALORE, July 21 (PTI):

PARTHENIUM, the obnoxious weed, whose unrestricted growth in many Indian cities is posing threats of an ecological imbalance and spreading allergic infections, could be controlled through its naturally occurring enemy weed, studies at the University of Agricultural Sciences (UAS) here have revealed.

The unwanted growth of parthenium, also known as the "Congress grass", could be successfully controlled and suppressed by growing a plant called "*cassia sericea*", Dr M. Mahadevappa and Dr Shyamsunder Joshi of the seed technology department at the UAS, have said.

Dr Mahadevappa said studies carried out during the past five years showed that although parthenium did not become totally extinct in areas infested by *cassia sericea*, its growth had been suppressed substantially by the new weed, which could emerge a possible killer of the poisonous weed in due course.

Parthenium, believed to have entered the country through imported food grains in the early sixties, could drastically reduce the area and yield of grasslands through its unrestricted

spread. It consumes a major portion of soil nutrition destroying natural vegetation of the lands and in some parts it had already invaded crop areas.

Besides adversely affecting plants and crops, the weed is also harmful to human beings and livestock.

ALLERGIC PROPERTIES

According to scientists at the Indian Institute of Sciences (IISc), who have isolated the parthenium allergen, the weed causes allergic contact dermatitis in people residing in areas infested with the weed. In addition to being a potent contact allergen to human beings, it has been shown to be responsible for the manifestation of chronic as well as acute toxicity leading to death of livestock fed on parthenium.

The scientists said the weed, which had a profound cytotoxic effect on normal and malignant cells in culture, was found to be excreted in milk by lactating dairy animals that consumed the weed. This, they said, was even more hazardous to human beings.

Apart from dermatitis, the scientists said, parthenium was also a

potential source of allergic rhinitis or nasal allergy, caused due to the large number of parthenium pollens present in the areas infested by it.

Clinical surveys coupled with allergy skin tests and invitro-immunological evaluations revealed that two out of every three subjects suffering from allergic rhinitis in Bangalore were sensitive to parthenium pollen. One major and three minor glycoprotein allergens responsible for this allergy have been isolated and characterised for further studies.

S AMERICAN ORIGINS

Dr Mahadevappa said the enemy weed of parthenium was first reported in India in the surroundings of Muddebihal town in Karnataka's Bijapur district. It probably came from tropical South America. It is an erect or sparingly branching herbaceous plant, 15 to 180 cm tall and normally grows in conspicuous colonies.

Ruling out the possibilities of the new weed also becoming an ecological threat in future, he said, a well grown *cassia sericea* plant produced hardly 300 to 400 seed compared with about 15,000 produced by a parthenium plant.

Dr Mahadevappa, said the plant's tender leaves were being used by some villagers as a leafy vegetable and its foliage as green manure. Its dried stems could also be used as fuel and some villagers even used it seeds as a blend with coffee seed.