

*“Where there is health,
There is hope..
And from hope
springs life...”*

“MUKTI”
The ONLY Bio-Chemical Solution
for
Eradication
of
Parthenium Weed

CONTENTS

The Problem: **Parthenium Weed**

- Description of weed
- Problems caused by Parthenium
- How it spreads?

Existing Solutions: **Not effective**

Our solution : **MUKTI – an effective Bio Chemical Solution**

Patent Certificate & Testimonials attached

Description of Parthenium Weed

- It is a herbaceous plant & is toxic
- It has a deep taproot and erect stem
- Its leaves are deeply lobed
- Its flower is creamy and white
- It has number of stems
- It is a Major Threat to Natural and Agro Eco-Systems in India
- Parthenium weed produces approx. 100,000 pollens & 25,000 seeds per plant
- Seeds spread easily through air, vehicles, farm machineries, animals, water etc



Problems Caused by Parthenium Weed

- It is a vigorous species, which colonizes in grassy land . It grows rapidly in bare areas along roadsides and water points / catchment area
- Reduces fertility of soil causing loss of agriculture, pasture and also increases management cost. It is very expensive to control
- **Jabalpur – based Directorate of Weed Science Research (DWSR) Director Jay G Varshney said, "The proper management of Parthenium weed could increase crop yield by 30 per cent and help India achieve self-sufficiency in import – dependent food items like pulses and edible oil"**
- It emits carbon dioxide and hence, poses a problem to nitrogen fixation and becomes a parasite, dependent on standing crops and animals in its vicinity.
- It is a major health hazard to human beings. Pollens are a major cause of asthma, especially in children and elderly people
- It is a major cause of Allergic, Trinitities Sinusitis, Eczema, Bronchitis, Eosinophilia, affecting people who live near it. It is also a major cause of dermatitis, a skin disease, among animals and human beings. Causes irritation to eyes also
- It reduces yield of milk and weight of animals

Abstract

Parthenium dermatitis is an immune-inflammatory disease caused by *Parthenium hysterophorus* and is the commonest cause of plant dermatitis in India. It is caused by airborne dry and friable plant particles including trichomes, and the most important allergens responsible for allergic contact dermatitis are sesquiterpene lactones. The combined type IV and type I hypersensitivity to Parthenium has been recently postulated. In sensitized individuals, it can cause a spectrum of clinical patterns, such as classical airborne pattern, chronic actinic dermatitis-like presentation, mixed pattern dermatitis, exfoliative dermatitis, widespread dermatitis, and other rare patterns. There is definite trend towards change from airborne pattern to chronic actinic pattern in natural history of Parthenium dermatitis. Contact sensitivity to Parthenium is everlasting, and hence the disease runs a chronic course with exacerbation during summers. Patch testing with acetone or aqueous plant extract is the simplest way of confirming Parthenium contact allergy. Management includes avoiding contact with allergen, managing dermatitis with topical corticosteroids/tacrolimus, and other immune suppressives like azathioprine. In future, we expect Parthenium dermatitis to become less prevalent due to rapid urbanization and possible development of new biological methods to eradicate the Parthenium. Genetic factors associated with susceptibility to Parthenium dermatitis need to be studied.

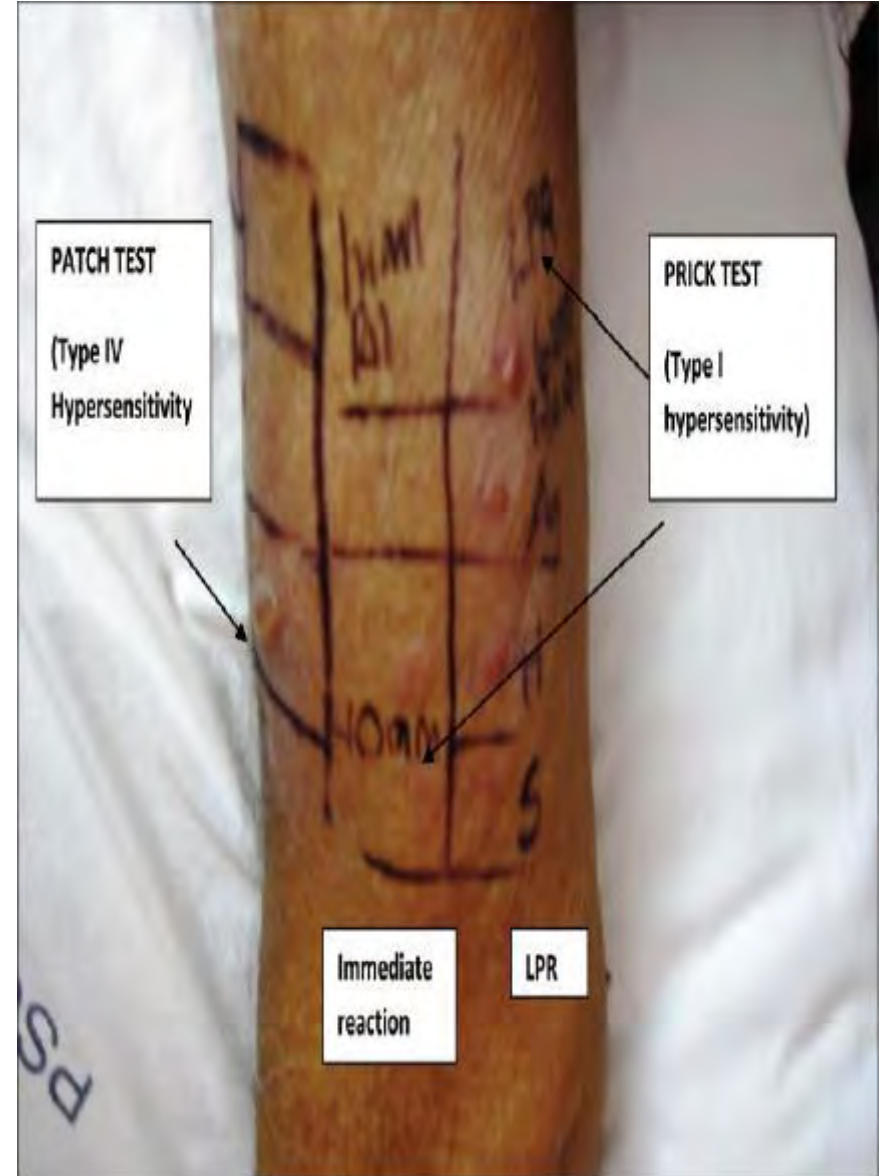
Health Problems due to Parthenium Weed



Health Problems due to Parthenium Weed



Health Problems due to Parthenium Weed



Health Problems due to Parthenium Weed



Table 1: Effect of *P. hysterophorus* on human health and livestock

Disorder	Reaction
Contact dermatitis	Seasonal eruption of the exposed skin surface
Eczema	Chronic lichenified eczema of the exposed skin surfaces
Eczematoid dermatitis	Skin eruptions and itching
Dermatitis	Skin eruptions and itching
Allergic reaction	Cracks all over the sole
Allergic papules	Sore throat, bubbles in the mouth
Fatigue	General weakness, skin eruptions
Severe dermatitis	Loss of scalp, body hair, ridging on nails
Fever in cows	Inflamed Fever in cows udder and rashes
Hypersensitivity in rabbit	Restlessness, natural falling of hairs from the dorsal region of the neck and back, small boils and oozing of boils.
Ulcerations in buffaloes, horses donkeys, sheeps and goats kidney and liver	Acute and chronic toxicity, ulcers both in the mouth and digestive tract, oesophagus and abnormal folds, necrosis of

Existing Solutions

THERE IS NO SOLUTION TO CONTROL PARTHENIUM WEED ONLY

- Till now there is no single method to control growth of Parthenium Weed only, due to high cost, impracticability, environmental safety etc
- Cutting or slashing of Parthenium enhances its regeneration
- Uprooting manually is not cost effective and can be done only before blooming as uprooting after fruit setting will be a sheer waste of time and money

Burning:

- Causes environmental pollution, not advisable also

Our Solution

- Can be used at any stage of life of the weed, from spore to matured plant
- Isolates Parthenium Weed only; no effect on any other vegetation in any way
- Immediately arrests further growth of Parthenium Weed
- It destroys flowers, seeds and leaves of the weed immediately
- Reacts immediately after spraying; complete decay of leaves, flowers and seeds within 24 – 48 hours
- No residual effect on soil; nutrient potential is unaffected
- It is non toxic; cattle can graze on grass where solution is sprayed
- Effectively tested internationally

Patent Certificate

क्रमांक : 022 005115
Sl. No. :



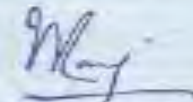
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THE PATENT OFFICE
पेटेंट प्रमाणपत्र
Patent Certificate
(Rule 74 of Patents Rules)



Patent No. : 223594
Application No. : 1145/MUM/2006
Date of Filing : 18/07/2006
Patentee : PRAVEEN CHHABRA

It is hereby certified that a patent has been granted to the patentee for an invention entitled **A PROCESS FOR MANUFACTURING OCTADECENOIC ESTER SULPHONATED - A WEEDICIDE - FOR PERMANENTLY ELIMINATING PARTHENIUM HYSTEROPHORUS** as disclosed in the above mentioned application for the term of 20 years from the 18 day of JULY 2006, in accordance with the provisions of the Patents Act,1970.

Date of Grant: 16/09/2008


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CYCLING MARATHON

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Weed busters



EXAMINING THE RESULTS ... DPI&F national parthenium co-ordinator Peter Austin, left, and bio-control researcher Joe Vitelli, right, take a look at the results of the new spray on parthenium with inventor Praveen Chhabra and patents business manager Raj Thaper.

By TRUDY BROWN

A NEW biological herbicide that professes to be a more efficient killer of parthenium weed is being evaluated by the State Government, with tests conducted in Charters Towers.

The herbicide, Mukti, has been invented in India by Praveen Chhabra who claims the product can be used at any stage of the weed's life and only affects parthenium.

Parthenium weed reduces the quality of land, readily colonising weak pasture with sparse ground cover, particularly along roadsides and heavily stocked areas around yards and watering points.

The annual cost of parthenium weed to Queensland's grazing and cropping industries — in production losses and on-farm control costs — has been estimated at \$22 million. The State Government biological control programs have cost a further \$9 million.

Parthenium is a herbaceous plant listed as a weed of national significance (WoNS) because of its potential to spread.

The National Parthenium WoNs co-ordinator, Peter Austin, from Biosecurity Queensland of the Department of Primary Industries and Fisheries (DPI&F) said current control measures including pasture management, biological control and herbicide treatment were successful.

"While we currently have a suite of control options available for parthenium we

are always on the lookout for additional tools that could compliment what is already available," Mr Austin said.

The bioherbicide is being evaluated by DPI&F staff at the Tropical Weeds Research Centre in Charters Towers as a potential herbicide to control parthenium.

The product is reputed to be selective to parthenium, biodegradable, non-toxic and quick acting, with the plant showing signs of damage hours after spray application.

The Tropical Weeds Research Centre has recently become a part of the newly formed Biosecurity Queensland (DPI&F) which has a lead role in developing management options for exotic weeds that threaten Queensland.

Trials will evaluate Mukti against another product that is currently registered in Australia for the control of parthenium.

If the product proves to be effective in this preliminary trial, further trials may be initiated and Agribusiness sought by the inventor to patent the product in Australia.

Product promoter and patent business manager Raj Thaper said the company was seeking a manufacturer to take up the patent on this biochemical for distribution internationally.

He said the product acted very quickly, providing results within 48 hours and killing the plant within three to four weeks.

Mr Thaper said the real advantage of this product over similar products on the market was that it killed the seeds immediately.

नितिन गडकरी
NITIN GADKARI



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Do No: _____/VIP/MRT&H,Shp/2018

DATE: 28 SEP 2018

To Whomsoever It May Concern

I am pleased to see the demonstration and effect of Parthenium Weed Remover "Mukti" which was given at Dhapewada, Dist Nagpur a few days ago. The weed remover manufactured by Unijules Life Science Limited, P-338, MIDC, Kalmeshwar, Dist Nagpur, MS is a good one, the effects are satisfying and the soil analysis done prior and post spraying does not show any ill effect, showing normal growth of plants. I extend my wishes to the manufacturer and wish success.

With Regards |

Yours,


(Nitin Gadkari)

The Director,
Unijules Life Science Limited,
P-338, MIDC, Kalmeshwar,
Dist Nagpur, MS.

FIELD TRIAL AT
DHAPEWADA (M.S.)
OF
PATENTED PRODUCT
MUKTI
ON
GAJAR GHAAS

FIELD TRIAL ON 21-08-2016

- SELECTED FIELD: DHAPEWADA
- DISTRICT: NAGPUR
- REPORT DATE: 04.09.2016
- TARGET SPECIES: *GAJAR GHAAS*
- PLANT HEIGHT: AVERAGE 3.5 TO 4.0 FEET

PARTHENIUM BEFORE SPRAY



PARTHENIUM BEFORE SPRAY



MUKTI spraying on Parthenium under process



Immediately after spraying white flowers
turn **yellow**



After 15 minutes



After 4 days leaves & flowers turn brown and starts decaying



After 15 days Parthenium Weed dries
in complete.



Dried and decayed Parthenium Weed



No effect on any other vegetation



**Dried and harmless Parthenium Weed
can be rooted out easily.**



Comparison and conclusion of soil report

Sr.No.	Parameters	Before Spray Results	After Spray Result	Remark
1	pH	8.13	8.06	NO SIGNIFICANT CHANGE FOUND IN ANY PARAMETER AFTER SPRAY
2	EC mS/cm	0.087	0.092	
3	OC%	0.52	0.64	
4	Available p as P ₂ O ₅ kg/ha	44.32	48.76	
5	Available k as K ₂ O kg/ha	150.8	148.9	
6	Sulfur ppm	34	38.2	
7	Copper as Cu ppm	1.42	1.69	
8	Iron as Fe ppm	1.04	0.98	
9	Manganese as Mn ppm	0.77	0.76	
10	Zinc as Zn ppm	0.39	0.41	

Summary...

- ✓ *Gajar Ghaas* is serious threat to Humans & Animal health
- ✓ Available management system for *Gajar Ghaas* is not feasible, safe and permanent
- ✓ Use of MUKTI – Only Bio Chemical Solution which gives satisfactory results selectively on *Gajar Ghaas* maintaining:
 - a. Soil fertility (No residual effect on soil)
 - b. Helps to increase agriculture produce
 - b. No effect on adjacent (other) vegetation
 - c. Cattles can graze grass where the solution is sprayed
 - d. Our Bio Chemical Solution is Non – Toxic and safe for Humans and Animals

*Chalo badaye ek kadam swachh
swasth bharat ki taraf
aur dilaye desh ko Gajar Ghaas se
“MUKTI”*



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THANK YOU