

Motivation Approach for Parthenium Management

A Report on Awareness Week - 2009



Jay G. Varshney
Sushilkumar



Directorate of Weed Science Research
Jabalpur (M.P.), India



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(August 7-13, 2009)

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Director
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**Complied &
edited by**

Dr. Jay G. Varshney
Dr. Sushilkumar

Technical Assistance

Mr. Ghanshyam Vishwakarama
Mr. Mehendra Patel
Mr. Gyanendra Singh

Cover Page Design

Dr. Sushilkumar



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Preface

Parthenium hysterophorus, a native of Mexico was first noticed in India in 1955 in Pune (Maharashtra). Since its first occurrence, it has now widely spread in about 35 million hectares land of India. Recent nation wide survey in India revealed its presence throughout the country. Its presence in varied situations like temperate, arid and humid climate may be considered its capability to survive in even extreme climate.

Parthenium has earned notorious name due to its detrimental effect on the health of human and animals. In human beings, it causes allergic contact dermatitis and several other skin diseases besides asthma to relatively sensitive people. If hungry animals feed on the plant, they may develop ulcers in mouth or intestine. The weed is also known to reduce production in crops due to its allelopathetic effect. Owing to all these health and environment hazards, Parthenium requires immediate management through various approaches among which public awareness is one of them. Since the inception of Parthenium problem, efforts are being made to manage the weed by various methods. Now it has been established that Parthenium can be managed by only integrated approaches including people participation. There are effective herbicides, which can control Parthenium easily in quick time, but it is not feasible and practical owing to its maximum spread in wasteland in large area. Likewise, manual removal from extensive area is not practicable due to high cost of labour. Biological control through Mexican beetle and competitive botanicals like *Cassia tora* is cheap and effective but these biological agents remain effective only during rainy season while Parthenium is capable to thrive in all the seasons on availability of moisture. Community approach involving stakeholders from all sectors of society may be one of the best strategies to manage Parthenium in the country keeping in view its high reproductive rate and adaptability to survive in extreme climatic conditions. It was felt necessary to make people aware about the danger of Parthenium and the ways of its management. Directorate of Weed Science Research (DWSR) is making efforts since 2004 to educate people by observing awareness campaign.

The aim of this document is to report all the activities carried out throughout the country during "Parthenium Awareness Week-2009" from 7-13 August 2009. It was observed that many ICAR organizations and KVKs observed the "Parthenium Awareness Week" and did some activities but they did not supply the information to DWSR. Nevertheless, this report witnesses the nation wide success of Parthenium Awareness Week. We hope that in coming years there will be more response from various institutes, SAUs and KVKs, to document the efforts made by their organizations in context to Parthenium management programme.

We hope that through this document, we may reach to different sectors of the society, executive and planners about our efforts to check the menace of the Parthenium in our country.

Jay G. Varsheny
Sushilkumar



Acknowledgement

We express our gratitude to Lt. General (Retd.) K.S. Jamwal, PVSM, AVSM, VSM ex GOC-in Eastern Command for being the Chief Guest during the inauguration ceremony of 'Parthenium Awareness Week' held on 7th August 2009 at CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur (Himachal Pradesh). We also express our gratefulness Dr S.C. Sharma officiating Vice Chancellor and Director of Research of the university who presided over the function and for his approval to hold inauguration ceremony at his University and to provide all the facility for this function. We are also thankful to all the professors and staff of university, for attending the ceremony. We are especially grateful to Dr. N.N. Angiras, Professor of Agronomy & Principal Investigator of Directorate of Weed Science Research Centre, Palampur whose untiring efforts as Convener of the programme made the inauguration function at CSK Himachal Pradesh Krishi Vishvavidyalaya Palampur (Himachal Pradesh). We are also thankful to Dr. Suresh and Dr. Neelam Sharma and all staff of DWSRC and university who remained associated with us during the programme.

We are heartily thankful to Dr. Mangala Rai, Secretary, DARE & Director General, ICAR New Delhi for his kind guidance and encouragement for this noble cause. We are grateful to Dr. A.K. Singh, DDG (NRM) for his time to time guidance and encouragement to hold such activities.

We are thankful to District Education Officer, Jabalpur for his keen interest to arrange posters and photo exhibition in various school of Jabalpur to aware students about Parthenium. We are especially thankful to Mr. Upendra Yadav of District Education Department who coordinated the exhibition programme for school children.

We are indebt to principals and teachers of various schools in Panagar Block of District Jabalpur for allowing and facilitate us to hold exhibitions on Parthenium to aware school children. We express our sincere thanks to all the principals and teachers of various schools located in and around Jabalpur who encouraged their students to participate in 'Parthenium Awareness Cash Award' Competition held at DWSRC during closing ceremony. We sincerely acknowledged the help of village Pradhan (chief of village) and members of Panchayat and principals of schools in the area to help and facilitate us to hold a awareness programme in the village Tagar where large number of people participated.

This programme could not be so successful without active participation of all the Directorate of Weed Science Research centers (earlier known as All India Co-ordinated Research Programme on Weed Control (AICRPWC) located throughout the country in various State Agricultural Universities (SAUs). We are especially thankful to all the PIs and staff of DWSRC for their overwhelming response and untiring efforts to make the programme a grand success.

Many Directors of Institutes under Indian Council of Agricultural Research (ICAR) specially deserve appreciations and acknowledgment who took special interest to organize various functions in their institutes to make people aware about Parthenium during 'Parthenium Awareness Week'.

All the organizers of "Parthenium Awareness Week" whose organization's activity has been given in this report deserve a lot of appreciation and compliments for having organized the function so successfully and to send the report to this Directorate.

We express our sincere thanks to all the participants like farmers, school children, NGOs and colony residents for their overwhelming response.

We express our gratitude to all the scientists, administrative, technical and supporting staff of DWSRC who remained involved in this programme at various stages from planning to implementation.

Jay G. Varsheny
Sushilkumar

1. Introduction

Parthenium hysterophorus, an exotic weed of Mexico origin has now spread throughout India. It has emerged as one of the most problematic weed in the country. Recent nation wide survey has revealed its presence in about 35 million hectares of land. Parthenium has established in varied climate and extreme weather conditions of India .

Earlier this weed was used to be considered as a weed of wasteland but now it has invaded every crop, orchards, plantations and forest areas. It has been reported to cause severe loss in crop productivity. It has also been found to occupy large area of pasture land hence reducing the fodder availability to animals.

Parthenium is notorious for causing health problems in man and animals. In Human beings, it causes allergic contact dermatitis and several other skin diseases. The pollens of the weed which are released in the air also cause asthma. The animals feeding on the plant usually develop ulcers in mouth or intestine. The milk of the cattle feeding on the weed also gets infected. Once this weed is established in a region, it soon replaces local vegetation. Owing to all these hazards, Parthenium requires immediate management through various approaches among which public awareness is one of them.

Although there are mechanical, chemical and biological methods to control Parthenium but each methods has some limitations due to its presence throughout the year in varied climate, high reproductive rate, small and light weight seeds and adaptability to survive in extreme climatic conditions. Public participatory approach involving stakeholders from all sectors of society may be one of the strategies to manage Parthenium in the country.





It has been experienced that individual efforts in pockets or in small area will not serve the real purpose due to its tremendous reproductive potential. There is need to involve community efforts to curb the menace of Parthenium. This Directorate (DWSR) is trying to educate people through awareness campaign in the form of "Awareness Week" since 2004 involving all the State Agricultural Universities (SAUs), ICAR institutes, Krishi Vigyan Kendra (KVKs) located throughout country, school children, colony residents and NGOs.

For effective participation of stakeholders and to facilitate other organizations, basic extension material like posters, folders and video film showing menace of Parthenium and its control was developed at DWSR and supplied to various organizations with the appeal to multiply at their own level and to distribute to stakeholders. Responses received from various stakeholders from different parts of country proved that thousands of people actively participated to curb the menace of Parthenium.



2.1 Directorate of Weed Science Research, Jabalpur

During last five years, Directorate of Weed Science Research (DWSR), Jabalpur is trying to bring awareness among people about Parthenium by observing various activities like workshops, lectures, demonstrations, rallies *etc.* throughout the country involving its centres earlier known as All India Coordinated Research Project on Weed Control (AICRPWC), ICAR institutes, KVKs and schools. In every program, all efforts were made to involve scientists, extension workers, local community, school children, political leaders, policy makers *etc.*, specially designed posters, handouts, CDs, advertisements in print and electronic media were used for maximum impact. Wide publicity through print and electronic media was given. A small documentary on "Parthenium and its management" was also prepared for wide distribution in the country. These activity received overwhelming response from people of urban and rural areas both and was given wide coverage in the local electronic and print media. Following posters in Hindi and English for 2010, extension folders, handouts *etc.* developed at DWSR, Jabalpur and were sent to each DWSR canter, ICAR institutes, SAUs, many KVKs in each state with the appeal to observe 'Parthenium Awareness Week' as deem fit. Consignments of live Mexican beetles were also sent to many DWSR centers and KVKs for releasing in the respective areas.



Following activities were done during "Parthenium Awareness Week -2010" at DWSR.

Launching of 'Parthenium Awareness Week' at Palampur (Himachal Pradesh)

It was realized that Parthenium problem can not be dealt by single institute or university or by individuals. This problem can be handled only by the collective efforts. Therefore, for giving wide publicity of 'Parthenium Awareness Week' at national level, it was decided to launch inauguration ceremony at some other place than Jabalpur involving high profile administrative or political persons. CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur was chosen for this purpose keeping in view of high level Parthenium infestation in Himachal Pradesh in general and Palampur in particular and the work carried out by the DWSR centre, Palampur.

The inauguration ceremony of the campaign was held at CSKHPKV, Palampur. Inauguration of this national level event was organized by the Department of Agronomy, Forages and Grassland Management under the aegis of Directorate of Weed Science Research centre (DWSRC) earlier known as All India Coordinated Research Programme on Weed Control of ICAR on 7 August, 2009 at CSKHPKV, Palampur. Lt. General (Retd.) K.S. Jamwal, PVSM, AVSM, VSM ex GOC-in Eastern Command inaugurated this national level awareness week. Dr S.C. Sharma officiating Vice Chancellor and Director of Research of the university presided over the function. Dr Jay G. Varshney, Director Directorate of Weed Science Research, Jabalpur was the guest of honour. About 800 farmers, army officers, students, extension officers and faculty members participated in the inauguration ceremony.

Lt. General (Retd.) K.S. Jamwal, during his inaugural speech emphasized the ill effects of this weed on human beings and livestock and stressed the necessity of participation of farmers, general public as well as personnel of the agricultural department in its eradication. Dr. Jay G. Varshney, Director, DWSR gave brief background on the necessity of conducting Parthenium awareness campaign at national level. He also gave all background information on the introduction of Parthenium in the country and current status in different states of the country. He appealed the public as well as the farmers to take immediate steps to eradicate and control Parthenium. A few representative of farmers also shared their experiences about the menace of Parthenium in causing health hazards and lowering the crop productivity besides reducing pastures area. On this occasion a series of events like lectures, farmers opinion about Parthenium, documentary film on Parthenium and Lantana management, exhibition on management of Parthenium and other obnoxious weeds, distribution of literature and awareness rally on Parthenium by NCC and NSS volunteers of the university were organized under the leadership of Dr. N.N. Angiras, Professor and Head department of Agronomy and Principal Investigator of DWSRC.

Distribution of extension material for exhibition to various schools at Jabalpur:

To facilitate exhibition in various schools in Jabalpur to educate school children, 100 sets of packets containing posters, folders and video CD were provided to Programme Co-ordinator of District Education Officer for further distribution to different schools under its jurisdiction. These materials were shown to children during the week. Thus thousands of schools children were educated about Parthenium.

Holding of uprooting programme in residential colony :

On 7-8-09, a Parthenium uprooting programme was held in the Maharajpur Housing Board , Colony. In this programme, all the staff of DWSR participated. Colony residents were motivated to clean Parthenium from their surroundings. About two trolley load of Parthenium was uprooted from the colony. This uprooted biomass was brought to the Directorate for compost making.



Holding exhibitions at schools:

DWSR also held exhibition on Parthenium in three different schools at Belkhadu and Panagar during 9-10 August. Dr. Sushilkumar, told children about the ill effects of Parthenium and the need to control it through photo exhibition and live specimens of Parthenium plants and biocontrol agent *Zygogramma bicolorata* and *Cassia tora*. After exhibition, students were motivated to uproot Parthenium from their school premises. Many students participated in uprooting activity. About 700 hundred students were educated through these exhibitions at three schools.



A Kisan Gosthi cum exhibition programme:

This Directorate also organized a Kisan Gosthi cum exhibition programme at village Tagar on 11 August, 2009 which was graced by Dr. Jay G. Varshney, Director, DWSR as chief guest. Other scientist from DWSR, many dignitaries of area like gram Pradhan, Panchayat members, school principals etc. also attended the function. About 500 children from nearby schools attended the function. At this occasion, farmers were told about the ill effects of Parthenium and ways of its management by imparting on spot training to farmer and students. Mexican beetles were released in the area for biological control.



Training to farmers and colony residents:

A one day training programme on Parthenium management was organized to train the progressive farmers and NGOs at DWSR, Jabalpur from 12 August, 2009. About 100 participants were trained. The training programme was inaugurated by Er. H.S. Bisen, Director-in-charge, DWSR. Er. Bisen stressed the need for spreading awareness about health risks caused by this weed especially among rural masses and children. He also emphasized the need of cleaning parthenium along the railway track sides. Dr. P.K. Singh stressed the need of community efforts to manage Parthenium. Farmers were trained



by giving various lectures through audio-visual aids. Practical demonstrations of various techniques like mass multiplication of bioagent, making of compost and vermin-compost were given to trainees. The certificates to trainees were given by Dr. Sushilkumar, Training organizer and Programme Co-ordinator of Parthenium Awareness Week.

Holding students cash award competition on Parthenium awareness:

The 'Parthenium Awareness Week-2009' was concluded on 13 August 2009 by holding a competition programme among the students to judge their awareness about the Parthenium. Wide publicity was given in various schools by sending information about the function to be held at DWSR on 13 August 2009. About 400 students from 15 different schools from Jabalpur and nearby area participated in the competition programme. To exposed school children about Parthenium and its management, photo exhibition cum live demonstration was done. A video film show was also arranged for the students.

Dr. Jay G. Varshney, Director, DWSR praised the students to take active part in spreading awareness among the society about controlling Parthenium in view of the ill-effects caused by it. A panel of examiner was made to check the copies of students. All the participating students took part in competitive exam arranged in the Directorate. The 1st prize of Rs 500 was won by Pulkit Tandan of Satya Prakasah Public School, Polypather; second of Rs 300 by Viendra Kumar Kachi, Saraswati Sishu Mandir, Suhagi and third prize of Rs 200/- was won by Kritika Sinha, Satya Prakash Public School, Jabalpur. Three consolation prizes were also given each of Rs 100/- to Sonali Bairagi, Palas jaiswal and Gaurav Patel from different schools of Jabalpur.



2.2 Andhra Pradesh

Acharya N.G. Ranga Agricultural University , Hyderabad

"Parthenium Awareness Week" was observed by Weed Science Research Centre, Rajendranagar from 7-13 August, 2009. On the eve of the programme, a brochure on "Parthenium and its management" was prepared and sent to all the extension centres of the University i.e. District Agricultural Advisory and Transfer of Technology Centres (DAATT centers) and Krishi Vigyan Kendras (KVKS) functioning in the University. Dr. L.G. Giri Rao, Director of Extension gave instructions to the Coordinators of DAATT centres and Programme Coordinators of KVKS to organize awareness programmes to bring awareness among farming community, school children and villagers regarding the problematic weed parthenium and its management. A poster on "Parthenium - problematic weed - its management" was also prepared on this occasion. Likewise, Dr.T.Y. Reddy, Dean of Agriculture and Dr. G. Lakshmikantha Reddy, Director of Research also gave instructions to all the Agricultural Research Stations, Agricultural colleges and Agriculture Polytechnics to observe "Parthenium Awareness week".

Parthenium awareness programme was organized at Pedda Ummenthal village of Parigi Mandal in Rangareddy district on 10.8.2009 by the scientists of Weed Science Research Centre, Hyderabad. Dr.A. Srinivas, Principal Investigator discussed about the Parthenium menace and importance of observing 'Parthenium Awareness Week' for the benefit of mankind and its eradication on community basis. Dr. M. Madhavi, Senior Scientist (Agronomy) explained to the farmers and villagers that Parthenium should be removed before flowering to avoid seed setting and further spread. With the help of live plant samples, she explained about the allelopathic effect of other plants viz., Cassia ceresia, Hyptis, Cenchrus spp, Amaranthus spp etc on Parthenium. She also explained about composting of Parthenium which has high nutritive value. Smt. M. Padmavathi Devi explained the health hazards caused to livestock and human beings and also explained about biological control of Parthenium through release of *Zygogramma bicolorata* beetles and advised farmers not to go for any insecticidal spray if such beetles are found infesting on Parthenium naturally. After the meeting, polythene hand gloves were provided to all the people and parthenium present in the surroundings was removed collectively. Farmers and villagers were convinced of removing parthenium before flowering.

Parthenium awareness programme was organized at Parigi village of Parigi (M) in coordination with Cost of Cultivation scheme, Rajendranagar. Around 200 school children participated in the programme. Scientists explained about ill effects of parthenium and management of Parthenium. Live specimens of allelopathic plants were also displayed to the children and emphasized the involvement of community in Parthenium management. Finally all the children have taken a oath to remove Parthenium before flowering in their school premises and house surroundings. Later parthenium was removed by the school children in school premises.

Parthenium awareness programme was organized at Ismailkhanguda (V) of Ghatkesar (M), Ranga reddy district in coordination with Agricultural officer, Ghatkesar on 11.8.2009. Ill effects of Parthenium management of parthenium and importance of parthenium removal before flowering was explained in the programme. Smt M. Padmavathi Devi, Senior Scientist participated in the programme.

S.No	Activity	Date	Place	Participants	Collaborators
1	Training cum demonstration on biological control of Parthenium hysterophorus	1.8.2009	Karimnagar	Students of college of Agriculture and farmers	DAATT cent re Karimanagar
2.	Training cum demonstration on biological control of Parthenium hysterophorus	8.8.2009	Eguvapalli, Garladime (M) Kalluru Agraharam water sheed area.	Farmers	Scientists of ARS, Reddipalli
3.	Removal of Parthenium in and around the village school with the help of students & farmers	9.8.2009	Chinnajalapuram, Singanamala (M), Anantapur	Villagers & Farmers	DAAT T Centre, Ananthapur
4.	Training cum demonstration on biological control of Parthenium hysterophorus	10.8.2009	Kothagadi Vikarabad (M)	Villagers & school children	DAATT centre, Ranga reddy
5.	Training cum demonstration on biological control of Parthenium hysterophorus	10.8.2009	Vargal, Ranga reddy dist	Farmers	Scientists of Water Technology, centre, ANGRAU and surveillance Inspectors of NIWS
6.	Removal of Parthenium in and around the village school with the help of students & farmers	11.8.2009	Etcherla, Srikakulam dist	Villagers and school children	Scientists from Agricultural college, Naira, Srikakulam district & NIWS staff
7.	Removal of Parthenium in and around the village school with the help of students & farmers	12.8.2009	Bijanepalli, Mahabubnagar dt.	Villagers and school children	RARS, Palem & NIWS Staff
8.	Training cum demonstration on biological control of Parthenium hysterophorus	12.8.2009	Nalgonda	Villagers & Farmers	DAATT Centre, Nalgonda, Dept. of Agriculture & NIWS Staff



DDS-Krishi Vigyan Kendra, Zaheerabad, Medak.

On the occasion of "Parthenium Awareness Week-2010' during 7 to 13 August 2009, a Parthenium awareness programme was organized at Pachasale, a green school near Machanur, JarasanghamMande, Medak.

Dr. Sailaja Kurra, Programme Coordinator DDS-KVK, Ms.Kirran vani- SMS-Extension Mr.Rammohan Reddy- Farm manger participated in the programme. Ms. Kiranvani explained about the ill effects and spread of Parthenium in the district. Mr. Ram Mohan Reddy explained about the eradication of the Parthenium and also about making of compost from the uprooted Parthenium plants. School children actively participated in the eradication programme.



Krishi Vigyan Kendra, Wyra

Parthenium awareness programme was organized by Krishi Vigyan Kendra, Wyra (A.P.) in the adopted village Punyapuram. About 35 farmers actively participated in the programme on 10-08-2009. In this awareness programme, KVK Scientist Dr. M. Srinivasa Rao, SMS (Extension) emphasized the importance of Parthenium removal before flowering to avoid seed setting and further spread. Dr. Rao envisaged the importance of community participation to control this dangerous Congress weed. Dr. A. Chandra Sekhar Rao, Research Associate, explained about its management and ill effects on animals, crops and human beings. Live specimens of plants were also displayed to the farmers. Finally all the farmers of the village took a oath to remove Parthenium before flowering in their field premises and residential home surroundings. Parthenium was removed by the participated farmers in their residential premises.



2.3 Assam

Assam Agricultural University, Jorhat

Parthenium (*Parthenium hysterophorous*), commonly known as carrot weed, congress weed, white top has been recognized as a major invasive weed in the state. Constant effort has been made to make the people of the state aware about the harmful effects of Parthenium to human and animal health, as well as its threat to the biodiversity. This year the 'Parthenium Awareness Week' was organized at Biswanath Chariali of the Sonitpur district in collaboration with Biswanath College of Agriculture of Assam Agricultural University.

Status of Parthenium in Sonitpur district of Assam

During last few years the weed has spread in new areas of the state of Assam in an alarming trend. The weed has spread in many places of the Sonitpur district like Tezpur, Dhekiajuli, Biswanath Chariali with varying degree of infestation. The occurrence of the weed, as observed during the survey, was mostly confined to the non-cropped areas like roadside, railway tracks, amusement parks, warehouses, playgrounds, dwelling habitat of urban areas etc. In Biswanath Chariali, the weed has been noticed in and around residential areas, playgrounds, educational institutions, both urban and rural markets in addition to its common occurrence on roadsides and railway tracks posing a big threat to environment. Some people, reported various illnesses like itching, respiratory problem etc during interaction. DWSR Jorhat Centre jointly with Biswanath College of Agriculture, Biswanath Chariali, organized various activities during the week.

Public awareness meeting

A public awareness meeting was organized on 11 August 2009 at the Binapani Natya Mandir, Biswanath Chariali. About five hundred participants representing various schools, colleges, villages, municipality wards, state and central government departments and organizations, non-government organizations (NGO), and general public as a whole attended the meeting. The session was chaired by Dr. P. K. Saharia, Associate Dean, Biswanath College of Agriculture (BNCA), Assam Agricultural University. Amongst the distinguished guests were Mr. Bhaskar



Jyoti Phukon, S.D.O. (Civil), Biswanath, Dr. P. K. Gogoi, Professor and Head, Department of Agronomy, AAU, Jorhat, Dr. R. K. Talukdar, Professor and Head, Department of Agril. Extension Education, AAU, Jorhat. Dr. Khiradhar Baruah renowned scientist and retired Professor of Chemistry, Biswanath College delivered the theme lecture, where he presented the ill effects of Parthenium on human and animal health as well as on our environment. Dr. J. Deka, Principal Scientist and PI, DWSR Jorhat Centre discussed about the management of the weed. The event was made more meaningful by active interaction from the audience, particularly questions from students and farmers.

Cycle rally

A cycle rally, comprising about 100 participants from NCC cadets, college and school students, members of youth clubs and general public, was organized. The rally was flagged off by Mr. Saurabh Jyoti Saikia, S.D.P.O., Biswanth amidst generous cheers from a huge gathering on the occasion and throughout the course of four kilometer distance it received warm appreciation and interest from the public.



Exhibition

An exhibition, ably conducted by Dr. Bipul Deka, Associate Professor, BNCA, was also held at the premises of the Binapani Natya Mandir to display photographs and demonstrate the Parthenium plant and its control by biological and chemical means. A good response was received from the participants with different queries about the weed plant and its control.



Leaflet and bulletin

Two leaflets, one each in local language (Assamese) and in English, were prepared on Parthenium plant, its habitat, ill effects on human and animal health, and its control. About 300 copies of the Assamese edition and 100 copies of the English were distributed among the public. Bisakta apatrino Parthenium aru iar niyontron, a bulletin written in Assamese was also distributed to the public including government administrative officers, municipality board officials, commissioners, NGO workers, press reporters, doctors, teachers and students of various schools and colleges during the occasion.



Publicity and media coverage

The various events and activities during the "Parthenium Awareness Week" received wide publicity both through print and electronic media. The proceedings of the public meeting was widely covered and published in almost all the local newspapers. Besides, the events were covered in the news programme of TV channel (DYx365).



2.4 Bihar

Rajendra Agricultural University, Bihar Pusa, Samastipur

Directorate of Weed Science Research (DWSR) on Weed Control, Rajendra Agricultural University, Pusa, Samastipur organized “Parthenium Awareness Week” during August 7-13, 2009 with great success and grandeur. The main objectives of the organization was to create awareness among the rural/urban people, students, farmers, govt. officials and policy planners about the harmful impact of this noxious weed and how to manage/utilize this weed. In this context, a series of programmes viz. Parthenium awareness rally, demonstrations and awareness meetings were conducted at different places and wide publicity about “Parthenium and its control” was given through local television, radio and news papers. During the event of Parthenium Awareness Week-2009 following places were visited by the scientists working under DWSR on RAU, Bihar, Pusa.

Dated	Venue
07.08.2009	Pusa H.Q. (Inauguration of the programme by Hon'ble Vice Chancellor)
08.08.2009	Tirhut College of Agriculture, Dholi Campus
09.08.2009	Pilkhil Middle School, Muzaffarpur
10.08.2009	Basic School, Bakhari, Muzaffarpur
11.08.2009	Bariyarpur Middle School, Muzaffarpur
12.08.2009	Basic School, Mahmada, Samastipur
13.09.2009	Sanchar Kendra, RAU, Pusa

Details of the 'Parthenium Awareness Week-2009' Programme were as follows :

On 7 August, 2009 the hon'ble Vice-Chancellor Dr. M.L Choudhary inaugurated the programme by uprooting the Parthenium and then flagged off the rally participated by Deans, Directors, scientists, students, staff members and labourers of the university. The hon'ble Vice-Chancellor gave more emphasis on the control of this harmful weed and utilization of this weed as vermicompost. Director Research expressed his views and said that the environment is also polluted due to this weed. Dr. N.K. Choudhary, Chairman, Deptt. of Agronomy expressed his view on the severity of this weed. Director, Agri-business Management told that this weed is the enemy of the farmers hence this weed must be removed. A number of slogans in Hindi viz. **“Hamne ab yah thana hai, Gajarghas mitana hai”**, **“Gajarghas hatao, Charma rog bhagao”**, **“Gajarghas hatao, Paryavaran Bachao”** were loudly spoken in the rally to make awareness amongst the people about this noxious weed. The rally were routed through University gate, Central School, Kisanghar, campus school, Sugarcane Research Institute and finally ended at the university gate with a lecture stressing on the Parthenium management by Dr. N.K. Choudhary, Chairman, Agronomy. Dr. D.K. Roy, Co-Principal Investigator of the project described briefly about the harmful effects of this obnoxious weed, the disease caused by this weed to the animals and human beings, effect on biodiversity due to this weed and the alternative use of this weed as vermicompost. A press conference was also held on this occasion. Finally, Mexican beetles were released on Parthenium population by hon'ble Vice Chancellor.

On the next day dated 08.08.2009, a meeting was held comprising of the students and scientist of TCA, Dholi. Dr. D.K. Roy, Co-PI, gave lecture on fast spread of Parthenium. The detailed lecture on the life

cycle of Parthenium, its control measures and its alternative use as vermicompost was delivered by Dr. Roy. Harmful effect of Parthenium was dealt by Mr. Dharminder. The lecture on biological control was delivered among the students and teachers by Dr. K.K. Sinha. Lastly, the meeting was ended in the form of rally and uprooting of Parthenium at the adjoining places of the Directorate of Seed Technology and College campus of Dholi. 1000 Mexican Beetles were released on this occasion by Head, Deptt. of Agronomy and students of TCA, Dholi on Parthenium patches.

On 09.08.2009, the programme was organized at Middle School, Pilkhi, Muzaffarpur. An exhibition was also displayed about the harmful effects of this weed and techniques to manage it. Dr. D.K. Roy expressed his concern about the spread of obnoxious weeds. Dr. Roy, also delivered lecture in details about the life cycle of this weed, its control measures and its alternative use as vermicompost. 800 Mexican beetles were also released at this occasion by principal and students of the school.

On fourth day, dated 10.08.2009, the awareness programme was organized at the Basic School, Bakhari, Muzaffarpur. Dr. D.K. Roy delivered lecture on the fast spread of Parthenium and its harmful effect on environment. Dr. Roy also described about the Parthenium, its harmful effect on human beings and animals and its alternative use as vermicompost. Mr. Dharminder delivered lecture on the biological control of this weed.

On 11.08.2009, the programme was organized at the Middle School, Bariyarpur to create awareness among teachers and students. 1000 Mexican beetles were released by principal of the school and Dr. D.K. Roy, Dr. Roy also delivered lecture on different aspects i.e. origin, spread, its life cycle and control measures of this pernicious weed. Mr. Dharminder described about the different diseases caused by this noxious weed.

On 12.08.2009, the programme was organized at Basic School, Mahmada. Dr. D.K. Roy, gave more emphasis on control of Parthenium and described in details about its control measures and biological control of this weed. He suggested teachers and students in the meeting to use this noxious weed as vermicompost. Mr. Dharminder described about the different diseases caused by this weed in human beings and the animals. The meeting ended in the form of rally. At the end of the meeting, 1000 beetles were released by principal and teachers.

On 13.09.2009, a seminar was organized on 'Parthenium management'. Dr. D.K. Roy, described in detail about the origin, spread, botanical description, control measures and the alternative use of Parthenium. Dr. Roy also gave emphasis on allelopathic control of this weed by growing *Cassia tora*, *Cassia cerasia* and marigold (*Tegetes erecta*). Vote of thanks was proposed by Dr. D.K. Roy, Co-PI of DWSRC.



2.5 Chhattisgarh

Indira Gandhi Krishi Vishwavidyalaya, Raipur

"Parthenium Awareness Week" was observed from 7 August to 13 August, 2009 by Directorate of Weed Science Research-IGKV center at Indira Gandhi Krishi Vishwavidyalaya, Raipur with great enthusiasm, as a part of national programme scheduled by Directorate of Weed Science Research, Jabalpur. The main objective of the programme was to create awareness amongst the general public, farmers, school and college students and policy planners about the impact of this noxious weed and available strategies to manage/utilize the Parthenium on eco-friendly basis in different situations. During 'Parthenium Awareness Week' a team of the DWSR-IGKV center comprising scientists, staff of NIWSP and technical staff of Department of Agronomy visited the following school/Colleges and organizations.

- ✕ Pranvanand Academy, VIP Road, Raipur
- ✕ P.G. Umathe Govt. H.S. Girls School, Shanti Nagar, Raipur
- ✕ Indira Gandhi Krishi Vishwavidyalaya, Raipur
- ✕ Govt. Higher Secondary school, Mana , Raipur
- ✕ N.H. Goel International School, Nardaha, Raipur
- ✕ N.H. Goel International School, Nardaha, Raipur
- ✕ Govt. Higher Secondary school, Nardaha , Raipur
- ✕ Arts and Commerce Girls College, Devendra Nagar, Raipur

The week was inaugurated on 7 August by Dr. M.P.Pandey, Hon'ble Vice-Chancellor, IGKV, and Raipur in the presence of Dr. S.S. Shaw, Director Research Services, Dr. A.K.Tripathi, Prof. & Head & OSD, PIM & A, and Shri S.K. Mallaiya, TO to VC. Initially, Dr. A.P. Singh informed the detailed programme of the week with a formal floral welcome of guests. In the inaugural address, Dr. Shaw stressed on harmful aspects of Parthenium. Dr. Shaw insisted the house to keep entire school premises free from Parthenium. Dr. M.P. Pandey briefed the history of Parthenium, its origin, harms and its biological control.

Detailed information on Parthenium through an audio-visual presentation was given. Dr. Taspas Choudhary arranged a quiz and very enthusiastic response was given by students. First 10 students given right answer were awarded by Hon'ble Vice-Chancellor. Finally, vote of thanks was given by Dr. Banerjee, Procter of the school.

On second day, the programme was organized at P.G. Umathe Govt. H.S. Girls School, Shanti Nagar, Raipur in the chairmanship of Dr. A.K.Tripathi, Prof. & Head & OSD, In the beginning, an introductory speech was given by Dr. A.P. Singh followed by the speech of chairperson who stressed upon biological control of Parthenium. After this, an audio-visual show was organized. The entire programme was very interesting for the students as well as staff. The quiz was conducted by Dr.A.P. Singh and very prompt answer was given by the students. First five students were awarded by the Chairman. Finally, vote of thanks was given by Shri Vermaji, the principal of the school. At the end of programme, Mexican beetles were released by the students and teachers of the school in their premises with the promise that they will visit regularly to monitor the results.

On subsequent days of the week, a campaign was run to eradicate Parthenium chemically, mechanically and manually from our own premises.

During the programme, different issues like awareness towards the harmful effects of Parthenium on human, animal health and environment, control measures especially biological control, eradication etc. and its usages for manure were highlighted through lectures, multimedia presentations, literature, posters and other means.

The targeted beneficiaries were from both urban as well as rural background. The students of urban areas were neither knew about Parthenium nor its harmful effects. Whereas, rural people were able to identify the weed but were unaware of harmful effects of the weed on human and animal health, its beneficial usage as manure making as well as its control measures.

On day 7, the programme was organized in the Arts and Commerce Girls College, Devendra Nagar, Raipur. Students of college were informed about the Parthenium as well as five new invasive weeds followed by multimedia presentation on Parthenium.

The participants appreciated the quantum and quality of inputs on Parthenium provided to them and raised several queries about availability of Maxican beetle for biological control of Parthenium. They were surprised to know about the ill effects of Parthenium and assured its eradication by themselves. At every venue, quiz followed by award was the new approach this year to keep on encouragement and make the event more memorable. The overall response of this awareness week was overwhelming.

Doordharsan and local channels as well as print media also reported repeatedly the need of awareness as well as its beneficial usages.



गाजर घास जागरूकता सप्ताह का शुभारंभ

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

गाजर घास के घोल से बड़ेगा रेशम उत्पादन

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

गाँवों से नियंत्रित होती है गाजरघास

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

गाँव उगाओ गाजर घास भगाओ

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

गाजरघास से खाद

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

गाजर घास खादनाक

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

छात्रों को मिली गाजर घास नियंत्रण की जानकारी

रायपुर, हरिया गांधी कृषि विश्वविद्यालय के छात्र-छात्राओं ने 7-11 नवंबर के दिनों में गाजर घास जागरूकता सप्ताह का शुभारंभ किया। कार्यक्रम के अंतर्गत गाजर घास के घोल से बड़ेगा रेशम उत्पादन का प्रदर्शन किया गया।

2.6 Gujarat

Anand Agricultural University, Anand.

The Parthenium awareness week was celebrated by DWSRC-Anand Centre, B. A. College of Agriculture, Anand Agricultural University, Anand during 7 to 13 August, 2009 with great success and grandeur in collaboration with Directorate of Weed Science Research, ICAR, Jabalpur. The main objective of the celebration was to create awareness among the public, students and authorities about the Parthenium to manage the eco-system. This year we covered both urban and rural areas as the events were held in Dahod, Kheda and Anand districts.

On 11 August 2009, 'Parthenium Awareness Week' was celebrated with the collaboration of Krishi Vignan Kendra, AAU, Devgadbaria. Training organizer of KVK Dr. G. G. Patel and other Subject Matter Specialists (SMS) as well as scientists of DWSR Anand centre delivered the lectures on Parthenium management to the farmers in the meeting held at Degavada village of Dahod district.

On 12 August 2009, programme was organized at Maholel village of Kheda district. Nearly 258 farmers actively participated in the function. The farmers were made aware of the impact of the Parthenium by Dr. R. B. Patel, Dr. B. D. Patel and Mr. M. I. Meisuriya, scientists of weed control and staff members of NIWS project actively interacted with the farmers to create the awareness about Parthenium and Alien weeds. Dr. R. B. Patel, Principal Investigator of DWSR-Anand Centre, AAU, Anand, while delivering his lecture gave a detailed account of the menace caused by number of alien weeds in general and Parthenium in particular and various ways available to control the weeds. Shri M. I. Meisuriya gave information on growth and seed production habit of the plants. He also gave information regarding allelopathic effect and suggested to broadcast the seed of cassia tora or cassia sericea prior to monsoon in Parthenium infested area for natural control. Dr. B. D. Patel gave information in details regarding congress grass and the Parthenium entry in field crops in this region. He also answered the questions related to congress grass asked by audience.

The posters on Parthenium awareness were also pasted and farmers were educated about harmful effects on Parthenium at different villages in the districts of Middle Gujarat during weed survey conducted in the month of August 2009. A wide publicity and coverage in the print and electronic media were given for the event. A specially prepared posters and pamphlets for the occasion and literature pertaining to the subject were fixed and distributed at different places.

In premises of Agriculture College, a seminar on 'Menace of Parthenium' was organized. A CD on Parthenium was showed to students and other participants. An exhibition on Parthenium was arranged by the project staff in the premises of the agriculture college on the eve of Parthenium awareness week.

All the scientists of the project were actively participated in Krishi Mahotshav 2009. Scientists explained the importance and objective of Parthenium awareness week and gave information regarding the allergic effect of congress grass on human and animal health as well as yield losses caused by the Parthenium. Scientists and farmers interacted for so many questions related to congress.

It may be mentioned that the programmes conducted under the Parthenium awareness week proved very useful in making villagers and students aware of the problem. Participated farmers promised that in future collective effort would be made to keep their villages and farm land free from this weed.



<p>રહેણાંક વિસ્તારમાં પાર્થેનીયમનો ઉપક્રમ</p>	 
	<p>ખોસુનાક નીંદા-ગાજ રથા સનું મિલંબાક</p>  <p>વંચેલની, પેલ હાંપરની, વેલ નં વી, વેલ નં વેલ, વાલ, વેલ</p>
<p>કુવાડિયાથી પાર્થેનીયમનું નિર્લંબક</p>	<p>અપિલ ભૂસીલ સંસ્કૃત નીંદા નિર્લંબક યોજના</p> <p>બં.અ. કૃષિ મહાવિદ્યાલય, આણંદ કૃષિ યુનિવર્સિટી, આણંદ</p>
	

2.7 Haryana

'Parthenium Awareness Week' was observed during August 7-13, 2009. This week was celebrated with much fan fare through out the state with active collaboration of Krishi Vigyan Kendras and Eco clubs of state by organizing trainings, demonstrations, organizing rallies by school students ,teachers and local residents.

Activities and programmes done during awareness week were as follows :

Sr. No.	Activity	Date	Place	Participants	Collaborators
1.	Chemical and cultural control of <i>Parthenium hysterophorus</i>	7.8.2009	DDA office Jind	26	Department of Agriculture, Haryana
2.	Trg cum demonstration on use of <i>Zygodium bicolorata</i> and glyphosate for control of <i>Parthenium hysterophorus</i>	7.8.2009	Community centre, Sector15 A Hisar	Local residents- 41	-
3	Demonstration on use of <i>Zygodium bicolorata</i> and glyphosate for control of <i>Parthenium hysterophorus</i> .	7.8.2009	Community centre, PLA colony Hisar	Office bearers of PLA Residents Welfare Association and local residents75	-
4	Seminar on biological, chemical and cultural control of <i>Parthenium</i>	8.8.2009	Vill Bahadur Pur Distt. Yamuina Nagar	Farmers 60	KVK Damla and Deptt. of Agronomy,CCS HAU Hisar)
5.	Display of video film on ill effects and management of <i>Partheniumhysterophorus</i>	8.8.2009	Deptt. of Agronomy, CCS HAU Hisar	Students56	-
6.	Display of video film on ill effects and management of <i>Partheniumhysterophorus</i>	9.8.2009	Deptt. of Agronomy, CCS HAU Hisar	Students108	-
7.	Seminar on biological, chemical and cultural control of <i>Parthenium</i>	10.8.2009	Sarouli, Distt. Panipat	Farmers 37	KVK Panipat
8.	Training cum demonstration on biological, chemical and cultural control of <i>Parthenium hysterphorus</i>	11.8.2009	Fateh Pur, Distt. Yamuna Nagar	Farmers 50	KVK Damla and Deptt. of Agronomy,CCS HAU Hisar
		11.8.2009	Kotarkhana,Distt. Yamuina Nagar	Farmers 150	KVK Panipat
		11.8.2009	Chhjapur Khurd, Panipat	Farmers 42	

Observations:

In South -western part of state where soils are some what saline or saline sodic, a new weed *Chenopodium ambrosoides* with vigorous seed multiplication rate and rapid growth habit has replaced Parthenium where as in north-western districts, particularly Ambala, Panchkula and Yamuna Nagar, this weed is being replaced by *Cassia occidentalis*, *Cassia tora* and *Cannabis*.



2.8 Himachal Pradesh

CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur

This weed is spreading like a wild fire in Himachal Pradesh with its first entry along roadsides. It has invaded the forest land, orchards, pasture and grasslands, fallow lands and kitchen gardens etc. in almost all the districts of the state except Kinnaur and Lahaul Spiti. As per conservative estimates this weed has spread in about 14 lakh hectare land of Himachal Pradesh. It causes health hazards like bronchitis, dermatitis, fever, vomiting etc. to the human beings. During survey, about 20 per cent of the inhabitants were found to suffer from the allergic effects of this weed. Even animals are affected by its ill effects like loss of hairs, loss of weight and damage to the liver etc. In grasslands its invasion has reduced the productivity of grass by 90 per cent. Day by day its spread has threatened the plant biodiversity and posing danger to the environment.



CSK Himachal Pradesh Krishi Vishvavidyalaya Palampur had the honour and opportunity to launch the national level programme of Parthenium awareness week-2009 celebrated all around the country from 7-13, August, 2009. Inauguration of this national level event was organized by the Department of Agronomy, Forages and Grassland Management under the aegis of All India Coordinated Research Programme on Weed Control of ICAR on 7th August ,2009 at CSKHPKV, Palampur. Lt. General (Retd.) K.S. Jamwal, PVSM, AVSM,VSM ex GOC-in Eastern Command inaugurated this national level awareness week. Dr S.C. Sharma officiating Vice Chancellor and Director of Research of the university presided over the function. Dr Jay G. Varshney, Director Directorate of Weed Science Research, Jabalpur was the guest of honour. About 800 farmers, army officers, students, extension officers and faculty members participated in the inauguration ceremony. On this occasion a series of events like lectures, farmers opinion about Parthenium, documentary film on Parthenium and Lantana management, exhibition on management of Parthenium and other obnoxious weeds, distribution of literature and awareness rally on Parthenium by NCC and NSS volunteers of the university were organized under the leadership of Dr. N.N. Angiras, Professor and Head ,department of Agronomy, forages and grassland management and Principal Investigator of the project . On this occasion two colorful information pamphlets in Hindi on integrated management of Lantana(Lal phulnu) and management of Ageratum (Neela phulnu) written by the weed scientists of the project based upon the technologies developed at the university were also got released from the Chief guest.

Dr. N.N. Angiras, welcomed the guests and made the public aware about the importance of celebration of Parthenium awareness week at national level. He lauded the participation of army officers, farmers and scientists in this inaugural function and thus reminded the slogan of **'Jai Jawan, Jai Kisan and Jai Vigyan'** as all three are important for the growth and development of the nation. In his address he



informed that *Parthenium hysterophorus* also called as carrot grass, congress grass, chatak chandani, and gajar ghass is an obnoxious weed. It is an alien weed with its origin in Mexico, North and Central America was introduced accidentally in India along with the wheat grains imported from America under PL-480 scheme during the era of food shortage. First time its plants were noticed in Pune in Maharashtra during 1955. Slowly it has spread to almost all the states of the country through inter state vehicular transportation and has posed a serious threat to the environment. Keeping seriousness of the problem it has been decided by the Directorate of Weed Science Research, Jabalpur to organize 'Parthenium Awareness Week' from 7-13 August, 2009 in all the states of the country to create awareness among masses about this deadly weed.

Two farmers namely Sh. Chuhad Singh and Sh. Bidhi Chand expressed their views about ill effects of Parthenium on human health and productivity of grasslands and thanked the weed scientists of the university in developing and demonstrating the technologies to manage these weeds on large scale. They informed the gathering that they themselves were the sufferer of ill effects of these weeds. Today farmers of their area have adopted the technologies developed by the university on large scale and are greatly benefitted in increasing the productivity of their crops and grasslands. They could increase the production of grass from 50 bundles with infestation of this weed to 450 bundles after its management.

Dr. Jay G. Varshney, Director, DWSR, in his address highlighted that weeds cause about 33 per cent loss in the productivity of different ecosystems apart from their harmful effects on human beings and animals. He discussed about the entry of various alien invasive weeds in the country through food grains and measures being taken by the Govt. to monitor and manage them. He informed the gathering as to why this Parthenium awareness week is being organized every year throughout the country.

Dr. Satish Sharma, officiating Vice Chancellor and Director of Research of the university in his presidential remarks made the gathering aware about the losses caused by the obnoxious weeds in Himachal Pradesh and the role this university is playing in their management. He advised all to participate in a missionary mode to tackle these weeds as thieves of the society.

The Chief Guest of the day, Lt. General K.S. Jamwal emphasized the underlying challenges of the menace of obnoxious weeds and ill effect of Parthenium on human beings, animals and biodiversity. He advocated strong interaction among Jawans, kisan and vigyan to tackle such problems. He appreciated the role of university scientists in creating awareness, developing and demonstrating technologies to manage Parthenium on large scale for the benefit of mankind.

Dr. K.K. Katoch, Director Extension Education of the university while proposing the vote of thanks highlighted the ill effects of Parthenium and other weeds. He expressed the need to have special live in seminar on weeds through Doordarshan and a special supplement of Parvatya Khetiwari magazine of the university on management of weeds as the weeds are causing huge loss to the food grain production and to the environment.

At the end farmers, students and other guests visited the exhibition and showed lot of interest. Rally on Parthenium awareness organized by NCC and NSS volunteers of the university was flagged off by the Chief Guest.

After this national level inauguration, weed scientists of the Department of Agronomy led by Dr. N.N. Angiras with the help of officers of State department of Agriculture and Principals of Govt. degree colleges organized awareness week on this obnoxious weed at different places in district Kangra, Hamirpur and Mandi from 8-13 August, 2009.

On August 8, awareness day was organized at Gram Panchayat, Ustehar, Baijnath, wherein Mr. Nagender Katoch, member Board of management of the university chaired the function. Thereafter

Parthenium awareness day functions were organized at Govt. Degree College Nagrota Bagwan ,Govt Degree college, Naura, TJCM Govt. Degree college, Sujampur Tihra (Hamirpur) and Govt. Degree College Jogindernagar (Mandi) on 10,11, 12 and 13 August, respectively under the chairmanship of respective college principals. In all more than 3000 farmers from different panchayats and students of different colleges and schools participated in this programme. They took keen interest in awareness meetings and expressed their serious concern about the harms being caused by Parthenium and other weeds. The Principals of respective colleges, officers of the state department of Agriculture and the Pardhans and up-Pardhans of the respective Panchayats extended full cooperation and took keen interest in organizing the awareness functions. The participating farmers and students were made aware about harmful effects of obnoxious weeds of the state like Parthenium(Gajar ghash), Lantana(Panchphuli), Ageratum (Neela Phulnu), Chromolaena (Kali Basuti) and Bidens(Laamb ghash) etc to the environment, human beings and animals and integrated techniques to manage them in different ecosystems by Dr N.N. Angiras, Dr. Suresh Gautam and Dr. Neelam Sharma, Sr. scientists of the project , with the help of movies, exhibition, lectures and question answer sessions.

An impressive exhibition depicting integrated technologies to manage obnoxious weeds ,the live sample of Mexican beetle , botanicals ,herbicide samples and spray equipments used to manage this plant was main center of attraction for the farmers. Technical bulletins in Hindi on management of Parthenium, Lantana and Ageratum were also distributed to the participants. Professor N.N. Angiras, Principal Investigator of Directorate of Weed Science Research Centre (DWSRC) who coordinated this activity under the auspices of AICRP-Weed Control apprised the farmers about origin, distribution, harmful effects and integrated control measures to manage different obnoxious weeds including Carrot grass, Lantana and Ageratum. He advised the farmers to be vigilant about their entry in new areas and to manage these weeds on campaign basis. In his speeches, he made the participants aware about harmful effects of these obnoxious weeds on the environment especially extinction of some of the medicinal plants, grasses and useful vegetation including wild fruits . The suppression of wild fruits plants in the natural forests have resulted in increased monkey menace in cropped lands. The overgrazing and over exploitation of the pasture and grasslands without proper management has provided favourable niche for invasion by the alien weeds resulting in more than 90 percent reduction in productivity of grasslands and reduced the area for grazing of live stocks apart from allergic effects. He made them aware about integrated technologies developed and demonstrated by CSKHPKV Palampur to manage this and other weeds in different ecosystems. He informed the participants that large number of farmers in different areas of Kangra district have started using these technologies to manage these weeds in their grasslands and obtained higher productivity by restoration of original ecosystem. Awareness rallies to create awareness among public about this weed were also organized by involving NCC cadets and NSS volunteers of different colleges and schools. A light refreshment was also served to the participating farmers and students at the end of each function.



2.9 Jharkhand

Birsa Agricultural University, Ranchi

'Parthenium Awareness Week' was celebrated at Birsa Agricultural University, Ranchi from 7 to 13 August, 2009 with objectives to educate students, general public about hazards of Parthenium in the society. The highlights of programme was film show on Parthenium provided by Directorate of Weed Science Research, Jabalpur, Madhya Pradesh, Poster making by students depicting harmful effects of Parthenium, procession by shouting anti Parthenium slogans etc. To make event more effective students of NSS were involved who participated very actively in celebration of this event.

A separate awareness programme for the school students of " Kisan Ucchha Vidyalaya, village Pithoriya was organized. Most of the students of this school belonged to farming community which were considered as perfect tool to transmit the hazards of Parthenium among the masses, particularly the farming community as now this weed is spreading in farmers field also. A massive rally by students was conducted in which students attracted people towards Parthenium as people asked about adverse effects of Parthenium.

A team of Doordarshan also covered the whole activities of Parthenium week celebration and transmitted in their routine programme for farmers.



2.10 Karnataka

University of Agricultural Sciences, Hebbal Bengaluru

The University of Agricultural Sciences, Hebbal, Bengaluru celebrated 'Parthenium Awareness Week-2009' with good success and grandeur, in collaboration with Directorate of Weed Science Research, (ICAR), Jabalpur. This year, Parthenium celebration was covered both urban and rural areas as the events were held in Bengaluru (urban influence) as well as in Hadonahally Krishi Vignana Kendra, Doddaballapura Taluk, Bengaluru Rural District and other KVK's through the Directorate of Extension (rural influence).

During August 7 to 13, 2009, scroller and newly prepared posters containing information about Parthenium, its ill-effect and management were displayed in the premises of Directorate of Weed Science Research Centre, University of Agricultural Sciences, Main Research Station, Hebbal, Bangalore. Also, displays contained were live specimens of the botanicals suppressing Parthenium like *Cassia sericea*, *Cassia tora*, *Hyptis suaveolens*, *Amaranthus spinosus*, *Cassia occidentalis*, *Mirabilis jalapa*, *Tephrosia purpurea*, *Tagetes erecta* and *Stylozanthus hamata*, seeds of the botanicals and boxes containing Mexican beetle, *Zygogramma bicolorata*. The beetles, hand outs brought out by DWSR Centre, UAS, Bengaluru and the seeds of *Cassia uniflora* were for sale. Video documentary film on 'Parthenium - a national weed, ill effects and its management strategies" prepared jointly by DWSR Centre, UAS, Bengaluru and DWSR, ICAR, Jabalpur was screened to the viewers both in vernacular language, Kannada and English.

At Bangalore, the awareness week started by projecting film show on Parthenium, followed by showing of specimens of Botanical plants and Mexican beetle and discussion with students and staff of School/ Colleges - High schools of Hebbal on 07-08-2009 (75 children), High schools of Boopasandra on 08-08-2009 (50 children); and UAS Campus High School at Hebbal on 11-08-2009 (75 children). In addition, on 7th to 13th August 2009, exhibition was also arranged about Parthenium and New Invasive weeds in front of DWSR Centre at Main Research Station, Hebbal from 9.30 AM to 5.30 PM for school children, NGO's and the public. The main beneficiaries of the event were students of several school/ degree colleges and university undergraduate and post graduate students who thronged the venue. Nearly 150 undergraduate and 100 post - graduate students/ staff of University of Agricultural Sciences, Bengaluru, visited the stalls and viewed the film show during the week. Several, NGO's, City Municipal Councils, various residence association of Bangalore, public, maintenance staff of public and private Organisations/Institutions visited the exhibition arranged for this purpose. Overall, around 700 people/ children visited the exhibition during the week to get first hand information on Parthenium and seeds of *Cassia uniflora* were sold.

On 09-08-2009, National Symposium on "The application of nuclear and space technologies for the development of agriculture/ the benefit of farmers" was organised by Consortium of Indian Farmers Associations, Karnataka Chapter in collaboration with UAS, Bengaluru and Bhaba Atomic Research Centre, Mumbai. To this conference, about 350 farmers of Karnataka and other invites participated. Along with this conference, Parthenium awareness programme was also clubbed and awareness was created by orally as well distribution of folders on Parthenium to all participants on 09-08-2009. This programme was witnessed by Hon'ble Ministers - Sri. S.R. Ravindranath - Agriculture, Sri. Basavaraj Bommai, Water Resources, Dr. S.A. Patil, Chairman, Krishi Mission, Government of Karnataka as Guests of Honours; Padma Vibhushan Dr. Anil Kakodkar, Chairman, Atomic Energy Commission, Government of India as Chief Guest; Dr. P.G. Chengappa, Vice-Chancellor, UAS, Bengaluru as chairman of the function; Officials of the Development Departments and other Secretaries of the Government.

On 13-08-2009, week long programme was concluded at Krishi Vignana Kendra, Hadonahally, Doddaballapura, Bengaluru Rural District, under the joint auspices of Directorates of Research and Extension in collaboration with DBT Rural Bio-Resources Complex (RBRC), University of Agricultural Sciences, GKVK. The campaign started by uprooting Parthenium in the premises and in around KVK from 10.00 to 11.00 AM by the villagers and the University Staff. This was followed by "Inaugural Function" between 11.00 AM to 2.00 PM. The function started with the invocation by High school children of Hadonahally. Dr. Doddahanumaiah, Associate Professor (RBRC) welcomed the gathering by offering bouquets to Smt. Lakshamma, President of Doddaballapura Taluk Panchayat as chairman of the function; Sri. S. Shivaramareddy, Assistant Director of Agriculture, Doddaballapura, and Sri. Appaiyanna, President, Krishik Samaj, Doddaballapura, and Sri. Chandranna, Vice- President, Doddaballapura Taluk Panchayat as Special Guests of Honors; about 110 Villagers of 13 villages of Doddaballapura Taluk; 50 School children and Teachers of Hadonahally village; other Invitees; Dr. T.V. Ramachandra Prasad, Professor of Agronomy and other staff of DWSR Centre, Staff of KVK and RBRC.

Dr. T.V. Ramachandra Prasad, Professor of Agronomy & PI, DWSR Centre, gave the background of the awareness campaign and briefed about harmful effects and management of Parthenium. Smt. Lakshamma inaugurated the function by lighting the lamp and joined by Sri. Shivaramareddy, Sri. Appaiyanna, and Sri. Chandranna. She also spoke about the problems caused by Parthenium in their villages and there is need for such type of awareness campaign. She stressed the need of the involvement of all the concerned to fight the menace posed by Parthenium.

Subsequently, Sri. Shivaramareddy, Assistant Director of Agriculture, recalled the introduction of Parthenium through imported food grains as narrated by Dr. Prasad and subsequent spread of Parthenium in around Bangalore and later on to villages. He stressed the need for the involvement of local groups at village level to manage the weed right from the emergence of Parthenium with the onset of monsoon. Sri. Appaiyanna, President, Krishik Samaj, Doddaballapura stressed the involvement of Government machinery repeatedly to propagate the idea of controlling the weed along with help of local groups. He indicated that Mexican beetle alone is not able to control the weed and there is need to identify any disease causing organism to manage the weed on a large scale.

Sri. Chandranna, Vice- President, Taluk Panchayat, indicated the necessity of Government effort in managing the weed three times during April- May (with on set of monsoon), August and December months so that Parthenium menace can be lowered considerably on a large scale. Dr. Doddahanumaiah, also stressed the necessity for involvement of students and enlightened citizens of this country in lowering the menace of Parthenium in their own premises. He also appreciated the efforts of Govt. of India in sanctioning a new project "National Invasive Weeds Surveillance Programme" meant for monitoring five new weeds obtained through imported wheat for distribution to the card holders in non-traditional wheat growing areas under Public Distribution System.

This function was witnessed by about 50 school children of Adonhally High School, and more than 110 villagers belonging to 13 villages namely - Bacchenahally, Gantiganahally, Vaddarahally, Pal Pal Dinne, Doddaballapura, Hadonahally, Tubagere, Ghati Subramanya, Lagumenahally, Turuvenahally, Laxmidevapura, Doddarangappannahally and Thirumagondanahally of Doddaballapura Taluk. At the end the function was concluded successfully by proposing vote of thanks to one and all participants by Dr. G.M. Sujith, Assistant Professor of Agronomy (SMS), Krishi Vignana Kendra, Hadonahally, Doddaballapura Taluk.

In all, nearly 250 persons from NGO's, public and private Institutions, Corporations, City Municipal Councils; 450 students from school children and under graduate and post-graduate students of University of Agricultural Sciences, Bangalore; 50 students of High School of Hadonahally and 110 villagers of 13

villages of Doddaballapura Taluk, participated in the awareness campaign and were benefited. In addition, Krishi Vignana Kendras' of Southern Karnataka also participated and disseminated the knowledge to more than 2500 farmers, students and public. These people were given pamphlets on Parthenium prepared in Kannada and English and video film on Parthenium (Kannada & English) (to Institutions/ Organisations only). Thus, 3360 people - farmers, students, public and staff of Organisations were educated on this occasion.

Publicities were given in media like E-TV, Chandana TV (channel of the Government), and All India Radio regarding day to day events about the awareness week organised by the DWSR Centre, Bengaluru between 6.30 to 7.00 AM in Annadata Programme (E-TV), 7.36 to 7.38 AM in Agriculture Section (Chandana TV) and 6.35 to 6.45 AM in Raitharige Salahe programme (AIR), respectively. In addition, part of the documentary film on Parthenium developed by Bengaluru Center as well as E-TV was also covered for about 4 to 5 minutes on few days from 6.30 to 7.00 AM during August 7 to 13, 2009. This served as good visual effect on Parthenium management strategy particularly for rural people of Karnataka.



University of Agricultural Sciences, Dharawad

As proposed by the Director, Directorate of Weed Science Research Jabalpur, the Parthenium Awareness Week was celebrated at University of Agricultural Sciences, Dharawad, Karnataka state from 7-13 August, 2009. During this week long celebration, a number of activities on Parthenium awareness and control were planned in consultation with Associate Director of Research (Head quarter). The programmes on Parthenium awareness were conducted as on campus and off campus activities. Display of banners and posters at important points in side campus was done to create awareness among public. Soft copies of the poster material supplied by the Directorate office, Jabalpur were used to make posters in Kannada and English. The posters were displayed in frequently crowded places such as at ATM centre, canteen and the bus stop. Inside the campus Parthenium eradication was taken up in two phases.

The Administrative officer of the University of Agricultural Sciences, Dharawad issued an official circular to all staff and students of the campus to actively involve themselves in the Parthenium eradication programme. The eradication programme was initiated at the main entrance gate and covered Agricultural Technology Centre (ATIC) building, Veterinary hospital all along the main road till the main building. As another part of this eradication program, the administrative block housing Directorates of Research, Extension, Post Graduate studies, office of the Comptroller. Administrative officer, other in house sections and the surrounding area were covered to eradicate Parthenium. The Director of Research, the officials of the university along with their staff actively involved in uprooting and eradication of Parthenium. The third phase of eradication covered College of Rural Home Science, College of Agriculture, Department of Agriculture Marketing and Co-operation, four blocks housing different departments, Farm sections, Main Agricultural Research Station (MARS), Hostels, Raith Bhavan, National Seed Project (NSP) and BSP unit, Institute of Organic Farming, Institute of Agricultural Biotechnology and Department of Horticulture, covering around 6-8 km roads and several hundred hectares of land. The staff and students at the main campus actively participated. Two tractors with trailers were arranged for collecting the uprooted Parthenium. About 4 tractor loads of uprooted Parthenium was collected during this eradication programme. A water tanker was also arranged all along the route so as to help volunteers to wash their hands. Hot tea was served to all staff and students at all phases just after this activity. The staff of Directorate of Weed Science Research, Dharawad was involved all through the week in eradicating Parthenium at other places.

As off the campus activity the Parthenium awareness programme was planned in two government schools of the adjoining villages. The awareness was created using audio visual aids as the activity was disrupted due to incessant rains and school children were busy practicing for the Independence Day Celebrations. Similar awareness programme was arranged at Tadahal village in Navalgund taluk of Dharawad district on 13 August 2009. Students and teachers of Shri Jagadguru Annadaneshwara High School, Tadahal, farmers of Tadahal, Aratti, Kongawad and Shelawadi villages actively participated in this programme. Shri. S.N. Meti, Progressive farmer of this region presided over this function. The programme started with an invocation song by students of Shri Jagadguru Annadaneshwara High School. Shri. S.M. Nondikeshwar, Head master extended a warm welcome to all farmers, scientists and students. Shri. Ramachandra Padaki, Extension guide, University of Agricultural Sciences, Dharawad, introduced all the guests. Speaking on this occasion Dr. C. R. Patil Head, DWSR Dharawad centre explained that Parthenium awareness and eradication programme is on the national agenda. The house was also informed about the initial negligence which resulted in Parthenium menace. Parthenium eventually has invaded all areas, infested all lands from fertile to waste lands, causing yield loss to farmers and other health problems to general public. He explained that Parthenium is an obnoxious weed, bearing several branches, full of flowers and each branch producing thousands of seeds which can easily spread. Its pollen

in air causes number of breathing related problems. Farmers were informed about various methods of controlling Parthenium and requested the involvement of all sections of society. He asked every one to take lessons from Parthenium invasiveness seriously, so that in future we can prevent any such weed menace.

Scientists from the Extension Education Unit, UAS, Dharwad delivered talk on different aspects of Parthenium menace and its management. Dr. Sunil Halakatti (Extension Education) explained the loss in terms of yield to farmers by Parthenium infestation. He also emphasized that if serious eradication measures are not initiated immediately to check the spread of Parthenium the farmers would experience more crop yield loss. Dr. B.C. Kamanna (Plant Pathologist) spoke on biological control of weeds. Dr. Chandaranath (Agronomist), spoke on the integrated management of Parthenium. He talked on how Parthenium plant can be utilized in compost making and called upon all sections of society to involve them in eradicating this weed. Dr. Hemalatha (Home Science) spoke about control of Parthenium, and precautions to be taken while handling this plant. She cautioned children about the possible allergic reactions if care is not taken while uprooting the Parthenium plants. Shri. S.N. Meti Progressive farmer and President of the function in his presidential remarks called upon all farmers to actively involve in such campaigns and make all efforts to get rid of the Parthenium menace. Shri Vittal Rao, Assistant Director of Agriculture, Navalgund taluk participated in this programme and urged farmers to observe Parthenium eradication throughout the year. Shri S.S. Gaddad (teacher) and Shri. B.N. Sajjan (teacher) conducted the proceedings of programme. The participants were served snacks and tea at the end of this programme. Later during the day, release of *Zygogramma bicolorata*, the Parthenium eating beetle was made in areas of heavy Parthenium infestations.

Efforts were also made to issue press note in leading Kannada and English News dailies about celebration of the Parthenium Awareness Week by the DWSR, Dharwad Centre.



ಕೃಷಿ ವಿಜ್ಞಾನ ವಿಭಾಗ ದಾರವಾಡ

ಪಾರ್ಥೇನಿಯಂ ಕಳೆ ತಡೆಗಟ್ಟಿ ಜನಜನಿತ ಸುಸ್ವಾಸ್ಥ್ಯ ಕಳೆ ವಿಜ್ಞಾನ ಮತ್ತು ಸಂಶೋಧನಾ ನಿರ್ದೇಶನಾಲಯ

ಪಾರ್ಥೇನಿಯಂ ಕಳೆ (ಪಾರ್ಥೇನಿಯಂ ಹಿಪ್ಪೋಪೋಲಿಯಂ) ಇತರೆ ಹೆಸರು : ಕಾಂಗ್ರೆಸ್ ಕಳೆ, ನಕ್ಷತ್ರ ಗಿಡ, ಕ್ಯಾರೋಟ್ ಕಳೆ, ಐಳಬೋಕಿ ಗಿಡ, ಪಿಲಕೆ ಗಿಡ.

ವಿಸ್ತೃತ : ೧-೧.೫ ಮೀಟರ್ ಎತ್ತರ, ಬೆಲೆಯುಳ್ಳ ಈ ಕಳೆ ಇನ್ನೇನು ಹಣ್ಣುಗಳನ್ನು ಉತ್ಪಾದಿಸಿ ಮಾಡುತ್ತದೆ.

ಸಮಸ್ಯೆ : ಐಳು ಬೀಜಗಳ ಎಲ್ಲಾ ತರಹದ ರಾಸಾಯನಿಕಗಳನ್ನು ಬೆಳೆಯುವ ಸಾಮರ್ಥ್ಯ ಹೊಂದಿದೆ. ಎಲ್ಲಾ ಹಸಿರು ಹಿಟ್ಟುಗಳನ್ನು ಐಳು ಬೀಜ ಬೆಳೆದು ವ್ಯಾಪಕವಾಗಿ ಹರಡುತ್ತದೆ. ಜೀವ ವೈವಿಧ್ಯತೆಯನ್ನು ಕಡಿಮೆ ಮಾಡುತ್ತದೆ.

ಮೃತ್ಸುರೀಣತೆ : ಇದರ ಪುಷ್ಕರದಿಂದ ಮತ್ತು ಇದರ ಸುಷ್ಕರೀಣ (Pollen) ನಿಂದ ಇನ್ನೇನು ಇನ್ನೇನು ಚರ್ಮರೋಗ, ಅಧರ್ಮ, ಕಠುಕಾಠುಕ, ಮೂಳೆ ಬೋಜುಬಣ್ಣ ಮುಂತಾದ ಕಾಯಿಲೆಗಳ ತೊಂದರೆ.

ಹಾನಿಕಾರಕ ಮತ್ತು ಸಮಸ್ಯೆ : ಇದರ ಪುಷ್ಕರದಿಂದ ನಿರಂತರವಾಗಿ ಸಾವ್ಯ ಮೂಲಕಾಡಿನ ಮೂಲಕ ಎಲ್ಲಾ ಬೆಳೆಗಳನ್ನು ಹಾನಿಪಡಿಸುವುದು.

ಪಾರ್ಥೇನಿಯಂ ಕಳೆವನ್ನು ನೈಸರ್ಗಿಕವಾಗಿ ಹತ್ತಿರದ ಇತರೆ ಸಸ್ಯಗಳನ್ನು ಬೆಲೆಯುಳ್ಳದ್ದು ಹಾಗೂ ಬೆತ್ತಲಾಡುವುದು.

ಕಂಡು ಬರುವ ಸಮೀಪ ಕಿತ್ತು ತಾಳುವುದು.

ಯುಗೋಪಯುಕ್ತ ವೈಶೇಷಿಕ ದುಂಜಿಗಲದ ಹಾನಿಕಾರಕ ಮಾಡುವುದು.

ಸೂಕ್ತ ಹಾಗೂ ಜಾಗರಣ ಕಳೆನಾಶಕ ಉಪಕರಣ

ತಯಾರಕರು: ಡಾ. ಸಿ. ಕರ್. ಪಾರ್ಥೇನಿಯಂ ಹಿಪ್ಪೋಪೋಲಿಯಂ ಕಳೆ ವಿಜ್ಞಾನ ಮತ್ತು ಸಂಶೋಧನಾ ನಿರ್ದೇಶನಾಲಯ.

2.11 Kerala

Kerala Agricultural University, Thrissur

Parthenium infestation is not yet wide spread in Kerala. Out of the 14 districts of the state, it has become a problem in Trivandrum, Indukki, Palakkad and Wayanad districts having road connections with the adjoining states of Tamilnadu and Karanataka where Parthenium is a serious problem. In the four districts mentioned above, Parthenium has infested large areas, especially in the low rainfall regions. Local people have informed that the spread of Parthenium in these districts is mainly through cow dung brought from the adjacent states for agricultural purposes.

Of late, sporadic infestation of Parthenium is seen in many parts of the state especially in the railway stations, bus stands, market places and pilgrim places. Centers indicating that the spread is through the vehicles coming from infested areas. The poor invasion of the weed in Kerala is supposed due to high rainfall in the state which prevents the seed set of the weed and also due to the presence of other fast growing weeds like *Hyptis suaveolens*, *Cassia tora*, *Sida acuta*, *Lantana camara* and *Mikania micrantha* which smother the Parthenium plants.

'Parthenium Awareness Week 2009' was observed with the following activities in the Kerala Agricultural University.

- A. **At College of Horticulture** : Classes of B.Sc., (Agri.) students were taken on the problems and management of *Parthenium hysterophorus*. They were shown the live specimens of the weed and discussed about the management of the weed including the biological control. *Zygogramma bicolorata* received from the Directorate of weed Science Research, Jabalpur were shown to them and explained about the use of beetle for bio-control of Parthenium.
- B. **Classes to the farmers** : A class of farmers was taken at Puthrnchira Krishi Bhavan in Thrissur district. Farmers were informed of the problems of the weed and asked to report any occurrence they may come across in their area so that it can be eradicated.
- C. **Paper presented at National Seminar on 'Land Use Planning for Biodiversity Conservation'** : A paper was presented on threat of Invasive weeds, in the National seminar on "Land use planning for biodiversity conservation" organized during 6-7 August at Thrissur by Kerala State Land Use Board. Dr. C.T. Abraham highlighted the spread and problems of Parthenium and stressed the need for containing the spread of the weed in the state.
- D. **Interaction with local people** : Discussions were held with local people in Vandiperiyar areas in Idukki district where Parthenium has already invaded. Though some of them were aware of the weed as a poisonous plant which causes allergic problems, many of them were ignorant about the weed or its problems. All told that weed is spreading to more areas in recant years. They were told about the problems from the weed and need to eradicate it before it spread to large areas.
- E. **Release of *Zygogramma* beetle** : A consignment consisting of about 1300 *Zygogramma bicolorata* beetles was received from DWSR, Jabalpur. These beetles were released in five locations namely, Nalleppally (2 spots) and Kozhinnjianpara (3 spots), where wide spread infestation of Parthenium was seen on road sides, coconut gardens and non cultivated areas.



2.12 Madhya Pradesh

RVSKVV, College of Agriculture, Gwalior

On 7 August, 2009 Parthenium awareness week programme was organized with the help of K.V.K. Morena at village Sirmor Ka Pura district Morena Shri Jamuna Prasad was the Chairman of the programme. Fifty two farmers participated in programme. The literature related to Parthenium was distributed among the farmers. Dr. K.S. Yadav Principal Scientist DWSR, Dr. Y.P. Singh PC KVK and Dr. C.S. Chauhan, SMS KVK, delivered lectures on Parthenium hazards, control measures in cropped as well as non cropped area and its utilization as compost.

On 8 August, 2009 the Parthenium awareness programme was organized at village Rajapur district Datia with the collaboration of KVK Datia. Shri Nand Kishor Rajput Chaired the function. Thirty eight farmers participated in the programme. Dr. S.S. Tomar, PI and Dr. K.S. Yadav Principal Scientist DWSR, Dr. Prabhakar Sharma PC, KVK Datia, Shri B.S. Kansana and Dr. A.K. Singh SMS, KVK Datia delivered the talks on Parthenium morphology, control measures and hazards to human, animals, crops and environment. Farmers also participated in uprooting the Parthenium plant near the village and crop fields

On 9 August, 2009 the programme was organized at village Lavan district Bhind. Fifty two farmers participated and Shri Tikamdas Maharaj chaired the programme. On this occasion Dr. S.S. Tomar, PI and Dr. K.S. Yadav, Principal Scientist DWSR gave talks on the nature and distribution of Parthenium, its control measures, utilization and its ill effects. Dr. R.S. Kushwaha I/C PC, KVK, Gwalior discussed with farmers to conserve the soil moisture and suggested the crops with less water requirement for rabi season in present drought conditions. Shri Sudeep Singh Tomar, Senior Surveillance Inspector, NIWS introduced the five alien invasive weeds and Dr. S.S. Tomar gave a brief knowledge about five invasive weeds named *Ambrosia trifida*, *Cenchrus tribuloides*, *Cynoglossum officinale*, *Solanum carolinense* and *Viola arvensis*. He also declared the prize of Rs. 1000/- for above each weed plant to bring after identification first time.

The Parthenium awareness week programme was organized at village Loha Devi district Shivpuri on 10 August 2009, in collaboration with KVK, Shivpuri. Sixty farmers and 15 RAWE students participated in the programme. The programme was chaired by Shri Amar Singh Rawat, Dr. K.S. Yadav, Principal Scientist, DWSR gave lecture on the appropriate solution to eradicate the Parthenium in fields and non-cropped areas and its hazards. Shri Suraiya, Asstt. Director Agriculture discussed about the utilization of Parthenium by making compost and vermi compost and introduced about the subsidy given to farmers under different schemes including on compost & vermi compost. Dr. R.K. Sharma, PC KVK Shivpuri, Dr. R. Bhargava and Dr. Chauhan, SMS KVK delivered the talks on various aspects and discussed the problems of farmers related to agricultural aspects. Shri Avinash Tomar, Surveillance Inspector introduced the five alien invasive weeds and discussed about their identification *etc.*

On 11 August, 2009 the programme was organized at KVK Aron (Guna). Forty two farmers attended the programme and Shri Daulat Singh meena chaired the programme. Dr. K.S. Yadav, Principal Scientist, DWSR, Dr. L.S. Tomar, PC, KVK, Shri B.L. Prajapati, SMS KVK and Shri Avinash Tomar delivered talks on all aspects of Parthenium. It was also stressed that Parthenium should be uprooted at pre-flowering stage for preparation of compost. Informations on five alien invasive weeds were also given to the farmers. They also discussed the problems of farmers and gave suggestion for solutions.

On 12 August, 2009 the programme was organized at village Bhasarwasa district Ashok Nagar. Shri Kundan Lal Bagri was the chairperson on this occasion. Dr. K.S. Yadav, Principal Scientist DWSR advised the farmers for control of Parthenium in cropped and non cropped area by mechanical, chemical and biological methods and discussed about its ill effects. Dr. A.K. Mishra, PC KVK, Dr. B.K. Jain and Dr. R.P.S. Tomar, SMS, KVK and Shri Avinash Tomar SI, NIWS discussed on different aspects related to agriculture. Fifty five farmers attended the programme and actively participated in uprooting the Parthenium.

Conclusion session of 'Parthenium Awareness Week' was organized on 13 August, 2009 at College of Agriculture, Gwalior. Hon'ble Vice Chancellor Dr. V.S. Tomar, RVSKVV, Gwalior was the chief guest of the occasion. The programme was chaired by Dr. N.S. Tomar, Dean College of Agriculture, Gwalior and Special guests were Dr. S.L. Naik, Dean faculty, Dr. H.S. Yadav, Director Research Services and Dr. Y.M. Kool, Director Extension Services, RVSKVV, Gwalior. 150 farmers from different villages of Hiri, Udaypura, Bhadaroli and Mastura participated in the programme. All the staff members of College and University, students, retired scientist/ professors attended the programme. Dr. S.S. Tomar PI, DWSR presented the summary of activities conducted during Parthenium awareness week and different activities of DWSR and NIWS project of Gwalior centre. Dr. V.S. Tomar Chief guest of function advised every one to give their cooperation to eliminate the problematic weed Parthenium by uprooting this weed around their houses, streets or fields. Dr. N.S. Tomar Chairman of function advised to minimize the weed seed bank of soil by control of Parthenium plant before flowering. Under technical session, Dr. K.S. Yadav, Dr. Asha Arora, Dr. Reeti Singh, Dr. U.C. Singh, Dr. S.K. Varma and Dr. R.L. Rajput also address the gathering in respect of hazards, chemical and biological, control measures and uses of Parthenium as compost. This programme was co-ordinated by Dr. S.S. Kushwah. In the end vote of thanks was gives by Dr. S.P.S. Tomar SMS, KVK.





Krishi Vigyan Kendra, Ujjain

'Parthenium Awareness Week' was celebrated effectively on 13-08-2009 by Krishi Vigyan Kendra, Ujjain (M.P.) at village Chandukhedi. During the occasion, lectures were delivered by the scientist. At the end of Programme, a rally was also organized by all the participants. Near about 200 Participants were benefited and get aware by this awareness campaign.

This programme was effectively conducted carried out by all the team of K.V.K Ujjain viz. Dr. A.K. Dixit (Programme Coordinator), Dr. A.K. Saxena, Dr. D.S. Tomar, Dr. S.K. Kaushik, Dr. Rekha Upadhyay, Eng. L.K. Jain and Smt. Ghazala Khan. RAWE students of College of Agricultural, Indore also assisted in making the programme effective.



2.13 Maharashtra

Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli

During Parthenium Awareness Week from 7 to 13 August, 2009 as a part of national event, three programmes were organized for farmers and citizens during the year 2009 in collaboration with Department of Agriculture, Maharashtra state.

On 11 August, 2009 programme was organised at Shirgaon, Tal. Chiplun, Dist. Ratnagiri as sporadic incidence of this noxious and eco-hazardous weed was observed in lateritic soils of northern Ratnagiri at Mandaki-Palvan, Tal. Chiplun during 2005. Another programme was organized at Koulapur, Taluk Miraj, Dist. Sangli on 12 August, 2009 as the region is severely infested by the incidence of Parthenium due to relatively low rainfall than Konkan and intensive cropping system under irrigated conditions.

The programme at Shirgaon was organized under the chairmanship of Sanjay More, Sarpanch Shirgaon. Mr. Sheikh, the progressive farmer was the Chief Guest. In addition, Dr. V.B. Nevase, the Agronomist & PI, Prof. A. V. Dhahiphale, Jr. Research Scientist, DWSRC, Shri. S.P. Gosavi, Senior Surveillance Inspector and staff of Agricultural Department were also present. Initially Shri. Sanjay More welcomed dignitaries on the dais, farmers and citizens present for the programme and explained the need and back ground for organizing this programme at Shirgaon, Dist. Ratnagiri. At Koulapur, Tal. Miraj, the villagers and students from school over willingly participated in programme under the chairmanship of Shri. Bhosale S.M., Agriculture Officer and Javan Mohite, Sarpanch, Kaulapur, Tal. Miraj also participated in programme. The another programme at Shewalwadi, Tal. Karad was organized on 12th August 2009 under the Chairmanship of Mr. S.S. Shewale, Sarpanch, Shewalewadi.

Dr. V.B. Nevase, the Agronomist and PI, DWSRC, Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli explained about sporadic incidence of Parthenium in south Konkan including intense incidence in low rainfall intensively in irrigated areas of Miraj. He also explained about ill effects of this noxious weed on human health and warned against increasing incidence of this health hazardous weed in causing skin diseases, asthma. He requested farmers, government departments and non-government organizations to make organised efforts to fight against this and other noxious weeds posing problems in agricultural lands, pastures causing health hazards to human beings and animals too. He further explained the participants about life cycle of this weed, its growth stages and methods of its mechanical, cultural, chemical and biological control including suppression through use of *Cassia tora* and *Cassia serecea* under non-cropped situations particularly in southern Maharashtra including Miraj tahasil in addition to way of using foliage feeding Mexican beetles (*Zygogramma bicolorata*). Shri S.P. Gosavi, Senior Surveillance Inspector, National Invasive Weed Surveillance Programme, Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli explained about problematic incidence of 'Alien Invasive Weeds' on human being, agriculture and livestock productivity. He further explained the participants about life cycle of five invasive weeds, its growth, development and methods of cultural, mechanical and chemical weed control. About 110 farmers and citizens attended the programme each at Shirgaon and Kaulapur.

A programme at Shewalwadi and Undale, Tal. Karad district. Satara was organized on 1st September, 2009 under the Chairmanship of Bajirao Patil, Sarpanch, Shewalwadi for "Control of Parthenium by using Mexican Beetle (*Zygogramma bicolorata*)"

Dr. V.B. Nevase, Agronomist & PI from Directorate of Weed Science Research Centre, Dapoli welcomed dignitaries on the dais and farmers and introduced about National Invasive Weed Surveillance Programme and also mentioned the biology and ecology of Parthenium species. Shri. S.P. Gosavi, Senior Surveillance Inspector, National Invasive Weed Surveillance Programme, Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli explained about the growth and development of Mexican Beetle, which control the Parthenium. The Mexican beetles (*Zygogramma bicolorata*) received for Directorate of Weed Science Research, Jabalpur were shown to the farmers and then released Parthenium weed for biological control.

There is large demand for this beetles from progressive cultivators. Mr. K.D. Ghadge, Surveillance Inspector helped in organising the programme and gave the vote of thanks to chairman, other dignitaries and farmers. About 85 farmers attended the programme.



'गाजर गावत', 'रानमोडी आणि इतर विदेशी आक्रमक तणांपासून जैवविविधतेला वाढता धोका - डॉ. नेवसे

बायोली- सुखवलीस रस्त्या व देवळेमार्गाच्या हुलका, मैदाने, पडीक जागेत आजूबाजू गाजर गावत, रानमोडी हे सगळे अत्यावधीन शेतांचे बांध, बराक कुकुरे, फळबागा, विविध इंग्रजी व भारमाही पिकांमध्ये पसरले.

'गाजर गावताधी' जीवविज्ञानिनी शमल प्रबंध म्हणजे ५००० ते १०,००० प्रति झाड (एकीकृत) अंशूल सुखावस्था नसल्याने मावीत धोतावा असल्याचे उच्च उपाय. सारके गाजर गावताचे बीज वाता, महाराष्ट्र पाणी, यहाणे इत्यादी माध्यमातून प्रसारित होत त्यामुळे जैवविविधतेला वाढता धोका निमाग झाले आहे, असे प्रतिपादन डॉ. विलास नेवसे, प्रमुख संशोधक, 'तणाशाक संघासमल संशोधन केंद्र' आणि वेट एन्वॉपनक 'विदेशी आक्रमक तणांचे राष्ट्रीय सर्वेक्षण', डॉ. बा.सा.को.कृ.वि. विद्यापीठ, बायोली वनी किरण सा. चिन्मया येथे एक जनजागृती कार्यक्रमात केले. ते डॉ. बा.सा.को.कृ. विद्यापीठ, कृषि विभाग महाराष्ट्र शासन (चिपळूण) आणि ग्रामस्थ शिरगांव यांच्या संयुक्त विद्यमाने आयोजित 'गाजर गावत व इतर विदेशी आक्रमक तणांविषयी जनजागृती कार्यक्रम' होत आहे.

'गाजर गावत' हे सगळे अत्यावधीन उपाय वनस्पती म्हणून ओळखले जाते. मानव, सस्यधन, विविध पिके, फळबागा, जंगले, पडीक जागेनी, रस्त्या व देवळेमार्गाच्या हुलका परसल्याने सस्यधन जैवविविधतेला वाढता धोका निमाग झाले आहे. परंतु 'गाजर गावताधी' प्रादुर्भाव जातिवर्णन प्रवेशात आणि आक्रमक तणांचे आक्रमक

नाही, त्याचे मुंबई आणि जवळपास व जग मज्जाता काही ठिकाणी प्रसुमाव दिसून येतो. या विदेशी तणाचा प्रथम प्रादुर्भाव सुने येथे १९५५ साली आयात केलेल्या धान्यातून झाल्याचे दिसून आले आहे. आता तो देशभर कल्याणदुमारी पासून जम्मू कश्मीरपर्यंत आणि कच्छ-शैलपट्टी इत्यादी भारतीय राज्यात केवळ ५४ वर्षांच्या कालावधीत सुमारे १० दशलक्ष हेक्टर क्षेत्रावर पसरल्याचे स्पष्ट झाले आहे.

गाजर शब्दा घाने असण्याचा समाविषयी ओळख सस्यधन या विदेशी तणाचे मुळाव्या, त्याचा जवळ झालेला प्रसार आणि गाजर गवतापासून मानव, प्राणी, फळबागा व विविध पीके पर्वर झालेले परिणाम स्पष्ट केले.

त्याचमार्गे रत्नागिरी, सिंधुदुर्ग, रायगड, सने किल्ल्यातील अंबा, कालू बागांस, जंगलात लसेन रस्त्यांच्या कडेला रानमोडी तणांचे देखील समृद्ध अशा जैवविविधतेला मोठे धोका संभवतो असे सांगून रेंड, चिन्मया, शिरगांव भागातील रानमोडी तणाचे मुले दाखवून ओळख करून देऊन त्यांच्या एकत्रीकृत व्यवस्थापनविषयी आणि त्याचा हिरवळखल म्हणून यापरसंबंधी माहिती जमलेल्या शेतकरी बहुवर्गिनीना देऊन त्यांच्या निवेदनासाठी संघटीत प्रयत्नांची सुरुवात असल्याचे व सवीने उपस्थित वेळ निवेदन करण्याचे आदेश केले. त्यानंतर श्री. संदेश नोवडे, वरीष्ठ संशोधन निरीक्षक 'विदेशी आक्रमक तणांचे राष्ट्रीय सर्वेक्षण' यांनी २००६ साली भारतात

परदेहातून आयात केलेल्या रेंडबरोबर पाच आक्रमक विदेशी तणे आली. त्या उपायी तणांची व इतर विदेशी तणांची सविस्तर माहिती त्यांनी सविस्तर.

कार्यक्रमाचे प्रस्तावना डॉ. बा.सा.को.कृ.विद्यापीठ, रावेलीचे प्रा. अमोल पट्टिके यांनी केले. सर कार्यक्रमाचे सूत्रसंचालन कनिष्ठ शैक्षणिक विभाग यांनी केले. यावेळी शिरगांव प्रसिद्धातील चरण श्री. संजय मोरे हे कार्यक्रमाचा अध्यक्षता हीले. कार्यक्रमात उपस्थित श्री. रविंद्र चौधरे, प्रायिकत अधिकारी श्री. दे.डी.पवार, प्रसिद्धातील शेताकरी श्री. तुजवर होळ अदी उपस्थित होते. सर कार्यक्रमात लाभ सुमारे ५०५ को-पुरुष नागरिकांनी केले.

डॉ. बा.सा.को.कृ.वि., कृषि विभाग महाराष्ट्र शासन चिपळूण आणि ग्रामस्थ शिरगांव यांच्या संयुक्त विद्यमाने आयोजित 'गाजर गावत व इतर विदेशी आक्रमक तणांविषयी जनजागृती कार्यक्रम' उपस्थित नागरिकांना मार्गदर्शन करताना डॉ. विलास नेवसे

Mahatma Phule Krishi Vidyapeeth Rahuri

The Head, Department of Agronomy, Mahatma Phule Krishi Vidyapeeth (MPKV) Rahuri Dist. Ahmednagar, Directorate of Weed Science Research, Jabalpur (M.P.), Krishi Vigyan Kendra, Solapur, and Agriculture Department, Solapur, have jointly organized 'Parthenium Awareness Day' and rabi season training programme at KVK, Solapur on 23rd September 2009 under the Chairmanship of Dr. Dinkarrao Sawant, Director of Extension Education, MPKV, Rahuri.

Dr. C.B. Gaikwad, Head Department of Agronomy M.P.K.V. Rahuri explained in detail about the introduction, dissemination and eradication of Parthenium to the farmers. He also mentioned in his lecture that eradication of Parthenium will be possible by joint efforts by all. He also gave the information about introduction of invasive weeds in our county. Dr. A.G. Wani, Chief Agronomist, Farming System Research Programme, gave the information about the cultivation of chickpea and Dr. D.K. Kathmale gave the information about rabi sorghum.

Dr. Lalasaheb Tambade, Chief Scientist, KVK, Solapur, gave the information about the activities being carried out at KVK, Solapur. Mr. Rane, SDO, Solapur gave information to the farmer about the different schemes implemented by the Agriculture Department.

The staff from Agriculture Department and KVK, Solapur attended the 'Parthenium Awareness Day' and answered the queries by the farmers. Dr. Dinkarrao Sawant, Director of Extension Education, MPKV, Rahuri gave the information about the technology developed by the University, important pest and diseases on different crops and their control measures. Similarly, he mentioned about the control of Parthenium through mexican beetle. The farmers were shown the larvae and beetles of *Zygogramma biocolorata*.

More than 400 farmers participated in the farmers rally.



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2.14 Orissa

Orissa University of Agriculture and Technology, Bhubaneswar

In order to create large scale public awareness on this dreaded weed, Directorate of Weed Science Research, OUAT-Bhubaneswar centre has been celebrating "Parthenium Awareness Week" every year since, 2004 under the initiatives of Directorate of Weed Science Research (ICAR), Jabalpur. This year also this centre observed "Parthenium Awareness Week" by organizing multifarious activities in a big way to create awareness among various sectors of the society about its hazardous effects from 7 to 13 August 2009. A detailed description of the activities undertaken is as follows :

Activities undertaken for the awareness campaign

This year, the awareness campaigns were observed in five places in five separate districts (Nayagah, Dhenkanal, Anugul, Boudh and Sonepur) in collaboration with Krishi Vigyan Kendras of OUAT. The activities undertaken were as follows:

1. Fixation of posters in places of public importance at Sunakhala and Vinodpada areas of Nayagarh, distribution of leaflets, holding students rally and meeting at Narendrapur High School, display of exhibits such as Parthenium plant of different stages, competitive plant species and herbicides etc.(07.08.2009)
2. Fixation of posters at Gajamara and Mahishapat, Dhenkanal, holding meeting at Gajamara High school, distribution of leaflets, display of Parthenium and other competitive plants (10.08.2009)
3. Fixation of posters at important places of Anugul town, conducting students' rally involving 150 students of Rantlei High School, holding public meeting at Rantlei village, display of competitive plant species and distribution of leaflets (11.08.2009)
4. Fixation of posters at Boudh town, Holding students' rally and meeting at Khuntubandh High school, distribution of leaflets, display of Parthenium and other competitive plants (12.08.2009)
5. Fixation of posters at Sonepur town, conducting meeting at Panisiali village, distribution of leaflets, display of Parthenium and other competitive plants, holding a rally of farmers and villagers (13.10.2009)
6. Coverage of the programmes in Doordarshan, other Oriya TV channels and Printing media.

1. Vinodpada, Nayagarh district (07.08.2009)

The awareness programme started from 7th August, 2009 by fixing posters around important places of the nearest town Sunakhala and Vinodpada village of Nayagarh district. A students' rally involving 150 students of Narendrapur High School, Vinodpada was flagged up at 7.30 AM that covered about 3 km around the locality. The rally was joined by scientists of OUAT and teachers of the school. While marching in the rally, apart from displaying placards and banners, the students exhibited live Parthenium plants. Leaflets in Oriya "Jibajagatara Satru - Ganjara Ghasa Nirakarana" were distributed among the students and teachers of the school and also to the public. After that, a meeting held in the auditorium of Narendrapur High School at 10.00 AM, was presided by Dr. Prasanjeet Mishra, Programme Coordinator, KVK, Nayagarh. Dr. S. S. Mishra, Agronomist and PI of the project made a power point presentation on identification, spread, utilization, harmful effects and means to control Parthenium before a gathering of students, teachers and other eminent persons of the locality. Dr. Jayanta Parida, Principal, Sunakhala College emphasized the role of students in awaking public awareness in this regard.. The meeting was over with a hearty vote of thanks by Dr.M.M.Mishra, Scientist of the project. The meeting was attended by Mr.L.K.Dash, Plant Protection Officer, Nayagarh, Dr.P.K.Nayak, Scientist, OUAT and scientists of KVK, Nayagarh.

2. Gajamara, Dhenkanal district (10.08.2009)

On 10th August, the campaign was organized at Gajamara High School, Dhenkanal. Posters on Parthenium were fixed in Mahishapat and Gajamara villages and leaflets were distributed among the students and farmers of the locality. In a meeting held in the school hall, Dr.S.S.Mishra, Head of the project discussed the various aspects of Parthenium with power point display before a gathering of students, teachers and farmers. Mr.L.D.Sahoo, District Agriculture Officer, Dhenkanal briefed on the eradication methods of Parthenium through eco-friendly approaches. Live samples of Parthenium plant, competitive plants like *Cassia tora*, *Tephrosia purpurea*, *Sida acuta* were displayed to the gatherings. The meeting ended with a vote of thanks by Dr.K.N.Mishra, Scientist of the project. The programme was presided by Dr.Manoranjan Satpathy, Programme Coordinator, KVK, Dhenkanal and was attended by Mr.A.K.Matali, Plant Protection Officer, Dhenkanal, Mr.Anil Kumar Dash, Assistant Agriculture Officer, Dhenkanal, Mr. J.Behera, SI of NIWS project, scientists of KVK and representatives of All India Radio, Joranda circle.

3. Rantlei, Anugul district (11.08.2009)

The 'Parthenium Awareness Campaign' was organized at Rantlei village of Anugul district on 11 August. Posters on Parthenium were fixed at important locations of Augul town and Rantlei areas. A rally of students of Rantlei High School guided by Dr.S.K.Swain, Programme Coordinator, KVK, Anugul and Dr.K.N.Mishra, Scientist of the project went around the localities at 7.30 AM. Placards and banners on Parthenium were displayed by the students during the rally. Then a meeting comprising of farmers, ladies and gents of the locality was arranged in Rantlei village at 9.30 AM. Dr.K.N.Mishra, Scientist of the project briefed on Parthenium, its hazardous effects, control methods, and utilization aspects in detail through power point presentation. Mr.Sachidananda Panda, Plant Protection Officer, Anugul discussed the prospects of Mexican beetles for the control of Parthenium. Then a farmers - scientists interaction session headed by Dr.S.S. Mishra was organized in the same place where the losses caused by Parthenium was discussed in detail. Other eminent personalities present in the programme were Mr.B.N.Samanta, President, District Farmers' Federation and Mr. J.Behera, SI of NIWS project. The programmes were organized by Programme Coordinator, KVK, Anugul and his team of scientists.

4. Khuntubandha, Boudh district (12.08.2009)

On 12th August, the campaign was organized at Khuntubandha High School, Boudh with the help of Dr. Manoranjan Mishra, Programme Coordinator, KVK, Boudh, As a part of the campaign, posters on Parthenium were fixed in different places of Boudh town and Khuntubandha village. A students rally comprising of 200 students with placards and banners were organized at 2.30 PM covering about 2 km around the village. Leaflets on Parthenium were distributed among the students and farmers of the village. Dr. S. S. Mishra, PI of the project made a well documented presentation on various aspects of Parthenium in a meeting arranged in the school premises at 3.30 PM. Live samples of competitive plants like *Cassia tora*, *Tephrosia purpurea*, *Sida aquata* etc. were displayed before the gatherings for advocating them for safe control of Parthenium. Other dignitaries present in the occasion were Mr. A.Pradhan, Farmers' leader, Boudh, Mr B.K.Raj, Head of NGO 'Swadeshi', Head Mistress of Khuntubandha High School, Dr.K.N.Mishra, Scientist of the project, Mr.P.Sahu, SI of NIWS project and scientists of KVK, Boudh.

5. Panisiali, Sonepur district (13.08.2009)

On the concluding day of the awareness week i.e. 13 August, the campaign was conducted at Panisiali village of Sonepur district in collaboration with KVK, Sonepur. Posters on Parthenium were fixed in important locations of Sonepur town and Panisiali areas. A public meeting comprising of farmers, ladies and gents of the locality, arranged in Panisiali Primary School at 11.00 AM., was presided by Mr.Amaresh Mishra, District Agriculture Officer, Sonepur. Dr. S. S. Mishra, PI of the project made a vivid discussion on Parthenium, its harmful effects on living beings and eco-system, method of control and utilization aspects. Leaflets were distributed to the participants and live samples of Parthenium and competitive plants were

displayed for easy understanding. Other eminent personalities participating in the programme were Mr.P.L.Dash, Horticulturist, Sonepur, Dr.K.N.Mishra, Scientist of the project, Mr.P.Sahu, SI of NIWS project, scientists of KVK, Sonepur and representatives of Doordarshan and Kanak TV. Soon after the conclusion of the meeting, the villagers went on a rally around the locality with placards and banners on Parthenium. The biological agent, Mexican beetles that controls Parthenium, sent by Directorate of Weed Science Research, Jabalpur were released in a patch densely populated with Parthenium inside the Bhubaneswar city area under the supervision of Dr.S. S. Mishra, Agronomist of the project All these events were well covered by mass media including electronic media like Doordarshan, Kanak TV, AIR, Joranda and printing media like leading dailies like The Sambad, The Dharitri.

1. The programme was telecasted by Doordarshan news section on 14.08.2009.
2. Telecasted by Kanak TV news section on 14.08.2009.
3. Broadcasted by AIR, Joranda on 11.08.2009.

This year, the centre planned to carry the awareness campaign to the interior districts infested with this dreaded weed. After successful campaign in those areas from 7 to 13 August, immediate feed backs of the programme were received by DWSR - Bhubaneswar centre through queries on Parthenium, made over telephone, letters , e-mails and personal visits to the project office. Thus the observation of "Parthenium Awareness Week, 2009" was a great success at Bhubaneswar Centre.

Impact of "Parthenium Awareness Campaign" at various places in Orissa since 2004

The people of the state were made aware of the dangerous Parthenium for the first time when DWSR-Bhubaneswar Centre initiated the awareness campaign in 2004 at Barang, an area in the suburb of Bhubaneswar. The impact was immediate as people started to remove the plant from their own surroundings. It has been observed that due to celebration of 'Parthenium Awareness Week', people who do not know about the weed are almost aware of this dreaded weed.



2.15 Punjab

Punjab Agricultural University, Ludhiana

The 'Parthenium Awareness Week' was organized throughout the country from 7- 13 August 2009 under the auspices of Directorate of weed Science Research, Jabalpur. Under this awareness Programme on Parthenium PAU, Ludhiana center organized 'Parthenium Awareness day' at village Dhaliwal bet, Distt Kapurthala on 11 August 2009. The wide publicity was given about this programme by putting posters on Parthenium awareness in the villages and this event was covered by news papers of this region to create awareness against Parthenium amongst people of the state.

The programme on Parthenium awareness at village Dhaliwal bet was organized on 11 August 2009 with the co-operation of the Principal, teaching staff and students of Tara Singh Memorial Khalsa Public School. The participants were teaching staff, students of the school and farmers and village panchayat, and farmers from the neighboring villages. The involvement of students was important because they easily understand the point of our interest about Parthenium menace. The programme started with introductory remarks by the Mr. J.S. Dhaliwal, Director of this school. After this, Dr. M.S. Bullar, Agronomist, gave detailed information about Parthenium. He apprised the gathering that how this weed plant came in India, this was an alien weed and than how it spread to other parts of country particularly in the state of Punjab. After this, he told about its growth habit, habitat and its adverse effects on crops, human and animal health. Different methods for the control of this weed were explained to the audience. The safety tips to be taken by uprooting this weed were also given. The audiences were asked to form awareness groups/committees at village, block and district level and to start community campaign to get rit of Parthenium which causes many skin diseases and allergies in both humans and animals. The audiences were also emphasized upon to keep their surroundings clean and free of this weed and that the cleanup operation to be carried out throughout the year in the village for eradication of this weed through various collective efforts. They were also told that eradication was possible only though community programme approach and they should not wait for some out side agency to do this job for them. Mr. Makhan Singh, Sarpanch of village Dhaliwal bat, also addressed the gathering. In his address, he thanked PAU for organizing the awareness day in their village. He assured they will eradicate all the Parthenium Plants from public area in the cillage and will also advise the farmers to eliminate the weed from their individual fields/ boundaries.

The director of the school asked the participants, particularly the students to get rid of this weed as suggested by the scientists of the Punjab Agricultural University, Ludhiana and proposed a vote of thanks. Dr. M.S. Bhullar, Dr. S.K. Randhawa, Mrs. Simerjit Kaur, Dr. Surjit Singh and Dr. U.S. Walia Participated in the programme from the Department of Agronomy, Punjab Agricultural University, Ludhiana. A handout in Punjabi and English about Parthenium was distributed at the function and Parthenium Awareness posters were put up at various places in the village and in the school premises. After detailed deliberations on Parthenium, practical demonstration for uprooting the Parthenium from the field was given and an eradication campaign was also launched in the village.

The Parthenium awareness campaign was continued and the posters on Parthenium awareness were also pasted and hundreds of farmers were educated about harmful effects of Parthenium at different kisan melas organized by the Punjab Agricultural University at Ludhiana on September 17 and 18, 2009, Bathinda on 15 Sepember, 2009.

On the whole, it may be mentioned that 'Parthenium Awareness Week' proved very useful to make aware villagers and students about the problem. The participants expressed that they knew little about the gajar bootil or congress grass but were not aware about the problems it may be creat for human beings, cattle and environment as told by the scientists from PAU. They promised that in future every collective effort would be made to keep their villages and from land free of this weed.



2.16 Rajasthan

Government Department of Agriculture Zone, Bikaner

'Parthenium Awareness Week' was observed and organized with much interest by the project centre during 7 to 13 August, 2009 with active participation of the Agriculture Extension Personals of Govt. Department of Agriculture zone 1 (C) Districts. (Bikaner.Churu and Jaisalmer) in particular. Farmers and farm women took part in the activities during 'Parthenium Awareness Week'. Scientist of the Agriculture Research Station, KVKs Directorate of extension Education, school children and collage students also participated in the programme. Dr. P.S. Rathore, Zonal Director, ARS, Bikaner presided over the inaugural function of Parthenium Awareness Week on 7 August, 2009. On 8 and 9 August 2010, visits were made in the hot spots of Parthenium infested area and people were contacted about this weed. The participants were made aware about the problems. Health hazards to human and animals were discussed at length with the help of video films depicting ill effect of it. The suitable methods of its control with chemical, mechanical and biological methods were also discussed. The live samples of this plant and bio-agent *Zygogramma bicolorata* were also seen and identified by the participants.

On 11 August, 2009, a programme was organized at Govt. School, Bichhwal, Bikaner. The teachers, school children and students of Collage of Agriculture, Bikaner participated. Parthenium plants were uprooted and burnt. Zonal Director research ARS, RAU, Bikaner was the chief guest of programme and was presided over by Principal Investigator AICRP-WC, ARS, Bikaner. It was realized by the participants that this type of programmes are to be more meaningful in the war against this harmful weed and should be repeated frequently. The bio-agent Mexican beetles sent by Dr. Sushil Kumar from DWSR, Jabalpur were released on the same day after receiving in the month of Aug. 2009 in Parthenium infested area of Rathi Pariyojana, Bikaner. Observations on survival of *Zygogramma bicolorata* insects were taken in future.



2.17 Tamil Nadu

Krishi Vigyan Kendra, Vriddhachalam

Activities report on Parthenium Awareness Week

Parthenium weed awareness colour charts distributed by the Directorate of Weed Science Research, Jabalpur were displayed in the notice board for creating awareness among the farmers, and other public people

Awareness on the importance of Parthenium management was made among the farmers at Keelthalaikulam village on 12.08.2009

Parthenium Awareness Programme was conducted at Govt. Higher Secondary School, Aladi village, Vriddhachalam TK, Cuddalore district on 19.08.09 so as to create awareness on the Integrated Management of Parthenium weed among the school students, public people and farmers. In the awareness campaign, Dr. N. Sathiah, Professor and Head, Krishi Vigyan Kendra, Vriddhachalam delivered Presidential address and explained elaborately the origin of Parthenium weed, its ill effects, damage capacity and the need of the hour to manage the weed holistically by community participation mode. In the campaign, totally 120 school students, public people, teachers and farmers participated. Subsequently, method demonstration on the cultural and mechanical methods to manage Parthenium weed was done by Dr. M. Raju, Assistant Profesor (Agronomy), Biological control by Dr. S. Douressamy, Associate Professor (Agrl. Entomology) and demonstration on composting of Parthenium by Dr. M. Babu, Associate Professor (Soil Science).

For mechanical control, students were given mask and disposal gloves to uproot Parthenium. Resource materials about Parthenium in the form of printed leaflets were distributed to students. Besides colour charts of information on Parthenium were also distributed to students to create awareness in their home villages. At the end, participation certificates, were also distributed to the students.

In the above campaign, Mr. L. Anbazhagan, Asst. Director of Agriculture, Th. R. Mohanraj, Horticultural Officer, Th. N. S. Selvaraj, Headmaster, Govt. Higher Secondary School, Aladi, Th. R. Ramachandran, President, Parents Teachers Association, Th. P. Narayanasamy Reddiar, KVK Scientific Advisory Committee Members, Th. K. Ranganathan, NSS Programme Officer also participated.

News paper messages were given on the integrated management of Parthenium weed.



Krishi Vigyan Kendra, Madurai

The Parthenium awareness programme was conducted in two days consecutively on 07 & 08.08.09 at Agricultural College and Research Institute, Madurai. The beneficiaries were undergraduate agricultural students and nearly 100 students were participated in this programme. The ill effects of Parthenium, its mode of spread and the control measures were dealt.

A Parthenium awareness programme was conducted in Jeyamangalam village of Theni districts on 11.08.09. Nearly 20 farmers were benefitted in this programme. Our staff explained the adverse effects of Parthenium to crop, livestock, to human beings and a demonstration was also conducted by spraying common salt solution in Parthenium infested field.

In Tekkur village of Pudukkottai district, farmers attended this Parthenium Awareness week on 12.08.09 with the mass of 50 farmers. The programme was conducted in the farmers field itself while they were working in the field.

Parthenium awareness programme was conducted on 13.08.09 at Kadayanallur village of Tirunelveli districts. The programme was conducted with 40 farmers in the field.

The leaflet on the control of problematic weeds like Parthenium, Eichornea, Ipomea was prepared in local language and circulated to the farmers and students those who attended the Parthenium Awareness programme.



தேயும் அபிவிருத்தித் துறை
 (தேயும் அபிவிருத்தித் துறை) மற்றும்
 தேயும் அபிவிருத்தித் துறை, திருச்சி

பேயுறுவியல்	பேயுறுவியல் அபிவிருத்தி	தேயும் அபிவிருத்தி
<p>1. தேயும் அபிவிருத்தித் துறை, திருச்சி</p> <p>2. தேயும் அபிவிருத்தித் துறை, திருச்சி</p> <p>3. தேயும் அபிவிருத்தித் துறை, திருச்சி</p>	<p>1. தேயும் அபிவிருத்தித் துறை, திருச்சி</p> <p>2. தேயும் அபிவிருத்தித் துறை, திருச்சி</p> <p>3. தேயும் அபிவிருத்தித் துறை, திருச்சி</p>	<p>1. தேயும் அபிவிருத்தித் துறை, திருச்சி</p> <p>2. தேயும் அபிவிருத்தித் துறை, திருச்சி</p> <p>3. தேயும் அபிவிருத்தித் துறை, திருச்சி</p>

தேயும் அபிவிருத்தித் துறை, திருச்சி
 தேயும் அபிவிருத்தித் துறை, திருச்சி
 தேயும் அபிவிருத்தித் துறை, திருச்சி

CENDECT Krishi Vigyan Kendra, Theni

'Parthenium Awareness Week' was celebrated at CENDECT KVK, Theni District on "28.08.09" as 'Parthenium Awareness Campaign' for Panchayat Presidents and Community Based Rehabilitation workers.

The programme was started with a silent prayer. The welcome address was delivered by Mr. G. Karthikeyan, Project Coordinator, CENDECT Medicinal Tubers Project. The campaign was presided by Dr. P. Patchaimal Chairman CENDECT KVK. In his presidential address, he explained the health hazards due to Parthenium. Dr. P. Marimuthu, Programme Coordinator, CENDECT KVK has delivered a Special address. In his Special address, he explained the preparation of compost from Parthenium and explained the activities carried out by CENDECT KVK in eradication of Parthenium.

Mr. M. Lord Savariraj, SMS (Plant Protection) CENDECT KVK explained the strategies for management of Parthenium in Agricultural System.

A demonstration on "Composting of Parthenium" was organized by Mr. N Raja, Farm Manager, CENDECT KVK and Mr. D. Jeyahar, Project Coordinator, CENDECT Disabled Rehabilitation Project. The chairman of Pannaipuram, Panchayat Presidents of Lakshmiaickanpatti, Renganathapuram, Seepalakottai, Erasakkanaikanpatti, Ammapatti, Kamatchipuram, Sukkankalpatti, Sankarapuram, and Melapoolananthapuram and Community Based Rehabilitation workers of 30 Panchayats from Chinnamanur and Uthamapalayam blocks have participated in the programme. A total of 36 persons participated in this programme.

The programme came to an end with the vote of thanks proposed by Mr. S. Suruli Andavar, programme Assistant (Computer), CENDECT KVK.



2.18 Uttarakhand

G.B. Pant University of Agriculture & Technology, Pantnagar

The "Parthenium Awareness Week" was organized at the G.B.P.U.A. &T., Pantnagar centre during August, 07-13, 2009. The AICRP on WC, Pantnagar centre coordinated the celebration with active participation of staff, students and residents of the University and farmers of Uttarakhand. The following activities were performed:

- It started with collection of Mexican beetles from the nearby parthenium infested areas and reared during the first week of August.
- On the morning of August, 07, 2009, the inaugural function was organized in the Conference Hall of College of Agriculture of the University. Addressing the audience, Hon'ble Vice-Chancellor Dr. B.S. Bisht stressed upon the ill effects of this problematic weed. He emphasized to manage this weed by taking it as a campaign through the involvement of various agencies like farmers' organizations, NSS, NGO's and other organizations. By searching its industrial uses this obnoxious weed can effectively be eliminated, he added. ϕ Director Experiment Station Dr. D. P. Singh, Dean Agriculture Dr. J.P. Tiwari and Head Agronomy Dr. S.K. Saini also presented a brief note about this troublesome weed. Programme Coordinator Dr. V. P. Singh gave a detailed presentation with the help of CD prepared by NRC-Weed Science, Jabalpur on this occasion. The function ended with a vote of thanks by Dr. Rohitashav Singh, Professor Agronomy. Just after the inaugural function, the beetles were released in the backyard of Conference Hall of College of Agriculture.
- In the afternoon session of August 07, 2009, Dr S.P. Singh, JRO weed Control delivered a talk on "Parthenium: an epidemic weed", Dr Singh explained its invasiveness behavior, its importance in Indian context, spread, environment and ecological hazards and its utilization prospects. He also described about its management options and future research prospects for its better utilization.
- Dr S.P. Singh, JRO weed Control, during awareness programme at A.N.Jha Govt Intermediate College, Rudrapur, District U.S. Nagar observed some plants of Parthenium which were fully covered with white strain and the growth of the plant was checked due to this fungus. The apical cells were showing the symptoms of dying back. After consultation with the Plant pathology department of the University, the fungus was confirmed as Mealy Bug, In the meeting of the all Weed control group scientists at Pantnagar, it was very enthusiastically accepted that the Mealy bug can be a tool for bio-control of Parthenium weed and there is a scope for more research on this fungus and Parthenium association with the help of Plant Pathology scientists so that the way of infestation of the fungus and its life cycle etc may be find out.
- From August, 08, 2009 onwards till August 13, 2009, the Parthenium awareness programme was conducted at various places (Annexure-I). Crop, Animals and Human health hazards of this weed were emphasized and demonstrated with the help of posters and Power Point Presentations. The scientists also explained in detail how this plant can be managed. Controlling this weed by biological means in heavily infested areas was demonstrated to the public by releasing beetles at different places.
- Hindi dailies like the Hindustan, Amar Ujala, Dainik Jagaran, Uttar Ujala, Shah Times and Punjab Kesari widely covered the news of celebration of the Parthenium awareness week. The whole programme (07-13 August, 2009) was a grand success in view of providing general awareness about this weed among the public.



- All the scientists of the AICRP-WC, Pantnagar Centre participated in this programme. All the staff member of department of Agronomy, Field and Lab staff of Weed Control and members from other departments of the University also participated in this programme.

Status and future prospects of Parthenium in Uttarakhand:

The Parthenium plant from waste land is now invading towards forest areas and crop lands. In Crop Research Centre at Pantnagar, it was found in experimental fields this year. During the weed survey programme scientists marked its spread up to 1500 m altitude and even in some places like Tehri and Pauri Districts up to 1800 m.

The areas where Zygotomma beetles were released 2-3 years back (particularly below 1000 m altitude) the Parthenium plants were found brown or greyish in colour and which was because of the successful feeding of the beetle on this plant. Beetle population was found to be very thin at high altitudes (above 1000 m).



2.19 Uttar Pradesh

N.D. University of Agricultural & Technology, Kumarganj, Faizabad

Various training programme at the university campus as well as KVK's and KGK's were organized by the Directorate of Extension of the university on various aspects of crop management for the farmers, extension workers, officers related to agricultural development activities, which is a regular feature. The scientist of the project participated and delivered the lectures in this training programme. Training on weed control technologies were also imparted to farmers, students and trainees visited from within and outside state.

List of activities under taken during 'Parthenium Awareness Week-2009 is given below :

S.No.	Activity	Date	Place	Participants
1	Training - cum- demonstration in biological, chemical and cultural control	August, 01 2009	KVK, Haidargarh Distt. Barabanki	48 farmers and farm women belonging 21 villages
2	Training - cum- demonstration in biological, chemical and cultural control	August, 01 2009	Haidarganj block Distt. Faizabad	25 kisan mitra and farm women belonging to 15 villages
3	Screening of video film for management of Parthenium	August, 02 2009	Janta Intercollage Pithla, Faizabad	153 students & 12 teachers
4	Screening of video film for management of Parthenium	August, 02 2009	Primary school Kumarganj, Faizabad	49 Students & Teachers
5	Parthenium Awareness Day	August, 03 2009	Kisan Bhawan Directorate of Extension NDUAT, Fzd	12 SMS of KVK's and Astt. Prof.
6	Training - cum- demonstration in biological, chemical and cultural control of weed – <i>Parthenium hysterophorus</i>	August, 7 2009	University Campus	UG and PG Student of University
7	Training - cum- demonstration in biological, chemical and cultural control of weed – <i>Parthenium hysterophorus</i>	August, 9 2009	Village – Jorium Distt. Faizabad	65 farmers, women & children
8	Training - cum- demonstration in biological, chemical and cultural control of weed – <i>Parthenium Hysterophorus</i>	August, 10 2009	Village – Milkipur Distt. Faizabad	45 farmers and farm women
9	Training - cum- demonstration in biological, chemical and cultural control	August, 11 2009	Village – Haliyapur Distt. Sultanpur	48 farmers and farm women



4 | फैजाबाद
खरपतवार से बचाव के टिप्स दिए
 किसानों को गेहूँ की खेती में खरपतवार से बचाव के लिए टिप्स दिए गए। खरपतवार नियंत्रण विभाग के अधिकारी किसानों को खरपतवार से बचाव के लिए टिप्स दिए। खरपतवार नियंत्रण विभाग के अधिकारी किसानों को खरपतवार से बचाव के लिए टिप्स दिए। खरपतवार नियंत्रण विभाग के अधिकारी किसानों को खरपतवार से बचाव के लिए टिप्स दिए।

गाजर घास उन्मूलन पर गोष्ठी
 कुमायराज (फैजाबाद), 27 अक्टूबर (शुक्रवार): नरेन्द्रदेव कृषि एवं पौधोद्योगिक विद्यालय के आयोजित गाजरघास उन्मूलन पर गोष्ठी का आयोजन किया गया। गाजरघास उन्मूलन पर गोष्ठी का आयोजन किया गया। गाजरघास उन्मूलन पर गोष्ठी का आयोजन किया गया। गाजरघास उन्मूलन पर गोष्ठी का आयोजन किया गया।

किसान गोष्ठी में खरपतवार पर चर्चा
 कुमायराज (फैजाबाद), 29 जून : नरेन्द्रदेव कृषि एवं पौधोद्योगिक विद्यालय में खरपतवार नियंत्रण विभाग किसान गोष्ठी का आयोजन गोड्डलपुर में किया गया। परियोजना प्रभारी डा. जयदेव शर्मा ने विदेशी मूल के खरपतवारों के बारे में चर्चा करते हुए कहा कि देश में हरित क्रांति से पूर्व गेहूँ का आयात विदेशों से किया जाता था। उन्होंने कहा कि कुछ खरपतवार जैसे नागफनी, जलकुम्भी, लैटीना को सजायट के लिए लाया गया। मुख्य अतिथि डा. एचपी त्रिपाठी थे। गोष्ठी में डा. जीशर सिंह, डा. चन्द्रश्याम सिंह, डा. एके सिंह, डा. हरिलाल जायसवाल, डा. आरएस सिंह, डा. राजकुमार पाठक, डा. आरएस सिंह, आशीष चाण्डेय व डा. भगवान सिंह मौजूद थे।

Chandra Shekhar Azad University of Agricultural & Technology, Kanpur

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13&8&2009	Xktj ?kkl tkx: drk dk; Øe ij oKkuhd xksBh dk vk; kst u ekuuh; dgyifr yed; vfrfFk% dh mi l Fkfr ea e/; kUg 12 -00 cts l sikni jksx foKku foHkx ds , tndr ku VDUksy kllh l sy eafd; k tk; skA



2.20 West Bengal

Visva-Bharati, Sriniketan, West Bengal

Directorate of Weed Science Research, Visva-Bharati, Sriniketan Centre observed the Parthenium Awareness Week from 7th to 13th August, 2009 with various activities through awareness and action oriented programmes involving different eco-clubs, farmers' club, NGOs, Gram Panchayet, village people, school, teaching and non-teaching staff and students' of different Bhavanas (Institutes) of Visva-Bharati. Most of the days of the week fixed for the programme (8, 9, 12 & 13 August) became holiday for which some of the programmes were shifted to other days. On 6.9.09 Dr. Duary delivered a lecture and made an orientation programme of newly admitted 42 B. Sc. (Ag.) Hons. students. Various aspects of parthenium - its characteristics harmful effects and management were explained. They were inspired to participate in awareness programme on parthenium in the Institute as well their respective residential areas.

During the week awareness programmes were arranged at the villages of road side of the route Bolpur-Bhedia, Bolpur-Suri, Bolpur-Ahmedpur, Bolpur-Muluk involving students of school, college, club, farmers and common people. Short lectures were delivered in gatherings and showing living samples of parthenium, its characteristics, harmful effects, showing local competitive plants, demonstrating removal of parthenium, burning and application of herbicides, etc. on 7th, 10th, 11th, 25th August, 2009.

A programme on parthenium removal in the Institute of Agriculture campus and organized on 19.8.09 involving undergraduate and post graduate students, teachers of the Institute of Agriculture and the staff members of DWSRC, Sriniketan. At beginning, Dr. Duary, PI, discussed the objective and necessity of organizing Parthenium Awareness Week. The students were divided into 7 groups, each group worked in a particular location. A pair of gloves was given to each student, teacher and staff member. The parthenium removal work was inaugurated by Dr. G. C. De, Professor of Agronomy by pulling few parthenium with a pair of gloves in his hand. At once the students, other teachers and staff members began to pull parthenium. Uprooted parthenium plants were categorized into two flowering/fruitlet plants and immature vegetative plants. Mature plants with flowers and fruits were burned later on and the vegetative plants were kept for making compost. In the same day a rally was organized involving undergraduate and postgraduate students, teachers and DWSRC staff members. They covered about 5 km bearing festoons, posters, leaflets, live samples of competitive plants, etc. Several demonstrations were organized in road side gatherings of people to make them aware about parthenium and a number of leaflets were distributed to them.

An awareness programme was organised on 22.8.09 at Rajatpur Indranarayan Vidyapith - a Higher Secondary School, 15 km away from Sriniketan. About 200 students of class X, XI and XII, teachers and non-teaching staff were involved in this awareness programme. After introducing the students with the staff members of DWSRC by the Head Master of the school, Dr. B. Duary explained the necessity of organizing such awareness programme. Then Dr. D. C. Mondal delivered lecture on the general characteristics of parthenium, its introduction in India and special trials for its rapid spread. Later, Dr. B. Duary explained the harmful effects of parthenium and its management through hand pulling, herbicides and bio-control and using alternative ways. Dr. Duary also highlighted the newly introduced invasive weeds and showed the photographs of these weeds which entered India during 2006-07 through imported wheat grains. In the question answer session, parthenium related questions made by the students were answered with critical discussion by Dr. B. Duary. He also discussed the role of students in this perspective. The programme was ended with the vote of thanks by the Head Master of the school.

On 3.9.09 an awareness programme was organised by Rathindra Krishi Vigyan Kendra (RKVK) of the Institute of Agriculture. Principals (Deans), Vice-Principals of all the Bhavanas (Institutes under Visva-Bharati), Chief Medical Officer (CMO), Finance Officer, Public Relation Officer, Accounts Officer, Assistant Accounts Officer, Internal Audit Officer, Deputy Registrars, Estate Officer, Heads of all Centres, Section

Officers along with their Assistant staff and all staff members of RKVK were present and it was a rare opportunity and very effective means of communicating all the staff members of Visva-Bharati and make them aware regarding parthenium. Dr. Duary, in his lecture in local language explained parthenium - its introduction, spread, special traits, harmful effects, management methods, biological control showing live samples of Mexican beetle, competitive plants and photographs, role of every individual as well as common people in eradicating parthenium. Dr. Duary also highlighted about 5 newly introduced invasive weeds along with photographs and power point presentation. There was overwhelming response by the dignitaries and other participants.

Poster display :

Posters in English, Hindi and local language (Bengali) were affixed at different location of Birbhum district particularly in the areas with large public gathering so as to make common people aware of the menace of dreaded weed.

The programme was covered by local TV channels, news papers. It was categorised as a grand success and there was overwhelming response from people of various sections. About ten thousand people were made aware directly or indirectly during the Awareness Programme.

