



75
Azadi Ka
Amrit Mahotsav

PROGRAMME

3rd International Weed Conference

Anand Agricultural University, Anand, Gujarat, INDIA

20-23 December, 2022



Supported by



Organizers

Indian Society of Weed Science
Anand Agricultural University
ICAR - Directorate of Weed Research



3rd International Weed Conference

20-23 December, 2022, Anand Agriculture University, Anand, Gujarat, India

(December 20: Day 1)

	Main Hall	Conference Hall 1	Conference Hall 2	Exhibition Hall	Cafeteria AAU Garden	Reception	
8:30	Oral-1	Oral-2	Oral-3				8:30
9:00					Breakfast	8:30-9:30 Registration	9:00
9:30	Inaugural session	Welcome address: Presidential address: Convenor, 3 rd IWC Release of books by dignitaries: ISWS Award announcement by Secretary, ISWS Address by Local Organizing Chairman, 3 rd IWC Address by: Guest of Honour Address by Chief Guests Vote of thanks: Local organizing Secretary, 3 rd IWC					9:30
10:00							10:00
10:30							10:30
11:00							11:00
11:30	Keynote Lecture and Plenary Presentation	11:30-12:10 Keynote Lecture by T Mohapatra 12:10-12:50 Plenary Lecture 1 by Prasanta Bhowmik 12:50-13:30 Plenary Lecture 2 by Dr Yoshiharu FUJII			High Tea		11:30
12:00							12:00
12:30							12:30
13:00							13:00
13:45				Poster Session	Lunch		13:45
14:30	Technical Sessions 1	Technical Sessions 2	Technical Sessions 3				14:30
15:00							15:00
15:30							15:30
16:00				Session Tea			16:00
16:30							16:30
17:00							17:00
17:30				Poster Session Tea			17:30
18:00	General Body Meeting of ISWS						18:00
18:30							18:30
19:00							19:00
19:30							19:30
20:00					Dinner		20:00
21:00							21:00

3rd International Weed Conference

(December 21: Day 2)

	Main Hall	Conference Hall 1	Conference Hall 2	Exhibition Hall	Food area	Reception	
8:30							8:30
9:00					Breakfast	8:30-9:30 Registration	9:00
9:30		<div>9:30-10:10 Plenary Lecture 3 Dr RK Malik</div> <div>10:10-10:50 Plenary Lecture 4 Dr Shoumo Mitra</div>					9:30
10:00	Plenary Presentation						10:00
10:30							10:30
11:00				Poster Session Tea			11:00
11:15							11:15
12:00	Technical Sessions 4	Technical Sessions 5	Technical Sessions 6				12:00
12:30							12:30
13:00							13:00
13:15				Poster Session	Lunch		13:15
14:00							14:00
14:30	Plenary Presentation	<div>14:00-14:40 Plenary Lecture 5: Dr RM Kathiresan</div> <div>14:40-15:20 Plenary Lecture 6: Dr BS Chauhan</div>					14:30
15:00							15:00
15:30				Poster Session Tea			15:30
15:45							15:45
16:00	Technical Sessions 7	Technical Sessions 8	Technical Sessions 9				16:00
16:30							16:30
17:00							17:00
17:30							17:30
18:00				Poster Session Tea			18:00
18:30							18:30
19:00	Cultural Programme						19:00
19:30							19:30
20:00					Dinner		20:00
20:30							20:30

3rd International Weed Conference

(December 22: Day 3)

	Main Hall			Exhibition Hall	Food area	Reception	
		Conference Hall 1	Conference Hall 2				
8:30							8:30
9:00		<div>9:30-10:15 Plenary Lecture 7 Dr NT Yaduraju</div> <div>10:15-11:00 Plenary Lecture 8 Dr Samunder Singh</div>			Breakfast		9:00
9:30							9:30
10:00	Plenary Presentation						10:00
10:30							10:30
11:00				Poster Session Tea			11:00
11:15							11:30
12:00	Technical Sessions 10	Technical Sessions 11	Technical Sessions 12				12:00
12:30							12:30
13:00							13:00
13:30				Poster Session Tea	Lunch		13:30
14:00							14:00
14:30							14:30
15:00							15:30
15:15				Poster Session Tea		Certificate distribution	15:15
16:00	Mahesh K. Upadhaya Award Lecture	<div>11:30-12:00 Mahesh K. Upadhaya Award Lecture by Dr Martin P Hill</div>					16:00
16:30	Closing ceremony						16:30
17:00	Vote of Thanks						17:00
17:30							17:30
18:00					High Tea	Certificate distribution	18:00
19:00							19:00
20:00					Dinner		20:00
21:00							21:00

Programme

3rd International Weed Conference

“Weed problems and management challenges: Future perspectives”

20-23 December, 2022, Anand Agriculture University, Anand, Gujarat, India

TUESDAY, DECEMBER 20, 2022

Venue: Main Hall

Date/(time): 20/12/2022 (9:30-11:00)

INAUGURAL SESSION

Welcome address:

Presidential address: **Convenor, 3rd IWC**

Release of books by dignitaries:

ISWS Award announcement by **Secretary, ISWS**

Address by **Local Organizing Chairman, 3rd IWC**

Address by: **Guest of Honour**

Address by **Chief Guests**

Vote of thanks: **Local organizing Secretary, 3rd IWC**

High Tea and Poster Sessions

Date/(time): 20/12/2022 (11:00-11:30)

Venue: Main Hall

Date/(time): 20/12/2022 (11:30-13:45)

Chair: **Dr KB Kathiria**

Co-chairman: **Dr C Chinnamuthu**

Rapporteur: **Dr VK Choudhary & Dr P Murali Arthanari**

Ensuring food security at global Level: Role of weed science

Dr T Mohapatra

Keynote lecture

Allelopathy utilization for weed control: Challenges and perspectives

Dr Prasanta Bhowmik

Plenary lecture

Bioavailability of allelochemicals in soil environment under climate change: Challenges and Perspectives

Dr Yoshiharu FUJII

Plenary lecture

Discussion and concluding remarks by Chair

Lunch/Posters

Date/(time): 20/12/2022 (13:45-14:30)

TECHNICAL SESSIONS

(Concurrent Sessions in Main Hall, Hall 1 and Hall 2)

Venue: Main Hall

Date/(time): 20/12/2022 (14:30-17:30)

TECHNICAL SESSION 1: New ways to deal with weeds, *i.e.* new technologies

Chair: **Dr BS Chauhan**

Rapporteur: **Dr Todar Mal Poonia & Dr Fayaz Ahmed Bahar**

Application of digital technologies for weed detection and precision management

Dr Muthu Bagavathiannan

Lead lecture

*Monitoring of water hyacinth spread using remote sensing techniques:
Challenges and future developments*

Dr Aviraj Datta

Lead lecture

Plant water extracts for organic weed management in groundnut

Dr Doddaga Subramanyam

Invited oral lecture

Robotic concept derived fuzzy logic based inter cum intra row weeder for wider row crops

Dr Satya Prakash Kumar

Sensor based pre-emergence herbicide application system for seed drills and planters

Dr CR Chethan

Tea break (15 minutes)

WEEDS: A Decision Support System (DSS) for guiding integrated weed management across multiple regions

Mr Purushottam Gyawali

Allelopathy-based biosynthesized silver nanoparticles for the management of water hyacinth

Dr VS Susha

A high-clearance self-propelled machine for simultaneous intra-chemical and inter-mechanical weeding in tall field crops: Development and evaluation

Dr Ajay Kumar Roul

Nano Atrazine synthesis and application for ecofriendly weed control in maize

Dr Nitin Gudadhe

Microencapsulation of pyrazosulfuron-ethyl and diclosulam in polymeric systems for prolonged and improved weed control efficiency

Dr Marimuthu Subramanian

Artificial intelligence based WeedBot for weed identification and removal in dense fields

Mrs Justina Michael

Nanof ormulation of Eucalyptus citriodora essential oil for the control of weeds

Miss N Swathika

Discussion and concluding remarks by Chair

TECHNICAL SESSION 2: Weed management in cereals-based cropping system

Chair: **Dr Virender Kumar**

Rapporteur: **Dr Debika Nongmaithem & Dr Ramphool Puniya**

Weed management in conservation agriculture: Challenges and perspective

Dr TK Das

Lead lecture

Can conservation agriculture practices help in sustainable weed management??

Dr Udai Pratap Singh

Lead lecture

Bio-efficacy of Carfentrazone-ethyl 40% DF against broad leaved weeds in wheat and their residual effect on succeeding soybean

Dr Mewa Lal Kewat

Drip irrigation and mulching reduces weed interference in spring maize

Dr Simerjeet Kaur

Response of weed management on growth, yield and yield attributes of Kharif maize

Dr Kiran Jadhav

Weed indices and yield of maize as influenced by different weed management practices

Dr B Sandhya Rani

Tea break (15 minutes)

Effect of pre- and post-emergence herbicides on control of weeds in irrigated maize

Dr Prabu Kumar Ganasekaran

Optimizing pre-emergence herbicide dose, methods and time of post-emergence weed management practices for maximizing irrigated maize productivity

Dr Senthivelu Muniyandi

Evaluation of different weed management practices on yield attributes and yield of maize

Dr S Manimaran

Mateno Duo TM – A novel herbicide for wheat growers of India to manage hard to kill weeds

Mr N Prem Kumar

Impact of drought stress on herbicide efficacy and biochemical traits of wheat

Dr Dasari Sreekanth

Weed interference and crop yield under a conservation agriculture-based maize-wheat-mungbean system

Dr Sonaka Ghosh

Ensuing economic benefits through use of different weed management treatments in Rabi sorghum-green gram

Dr Swapnil Deshmukh

Tillage and weed management practices on weed prevalence, crop productivity and economics in maize under maize-chickpea-green gram cropping system

Dr Muni Pratap Sahu

Effect of herbicide mixtures and nano-urea on weeds and productivity of wheat

Mr Ayan Sarkar

Weed dynamics and management in wheat in relation with different sowing times and rice residue management systems

Dr Ramanpreet Kaur

Integrated weed management in wheat

Mr Deepak Loura

Discussion and concluding remarks by Chair

Venue: Hall 2

Date/(time): 20/12/2022 (14:30-17:30)

TECHNICAL SESSION 3: Weed management in oilseeds and vegetable crops

Chair: **Dr TV Ramchandra Prasad**

Rapporteur: **Dr Rakesh Kumar & Dr Deepak Pawar**

Weed management in Vegetable crops: problems and perspectives

Dr DD Patel

Lead lecture

Efficacy of different weed management practices on weed control and yield of Kharif groundnut

Dr Arvind Verma

Invited oral lecture

Long term effect of tillage and weed management on weed dynamics and productivity of yellow sarson and greengram under direct seeded rice-yellow sarson -greengram cropping system

Dr B Duary

Invited oral lecture

Post-emergence application of Imazethapyr 10 SL on soybean and its residual toxicity effect on performance of succeeding crops in transitional tract of Dharwad, Karnataka

Dr JA Hosmath

Integrated Weed management in Indian mustard

Dr Rabiratna Dash

Tea break (15 minutes)

Effect of integrated weed management practices on growth and yield of mustard

Dr Tushar Thorat

Effect of Different Weed Management Practices on Yield and Economics of Mustard

Dr Samatha Parameswari Yasa

Evaluation of chemical cum mechanical weed Management – A way to reduce chemical usage in sunflower

Dr Selvakumar Thambiyannan

Effect of integrated weed management and organic manures in sunflower

Miss Kimdeiting Haokip

Evaluation of bio-efficacy of different herbicides on weeds and their impact on fresh fruit bunch (FFB) yield of oil palm

Dr Sanjeevraddi Reddi

Management of complex weed flora in onion

Dr VJ Patel

Effect of different weed management options in vegetable pea

Dr Ramanjit Kaur

Weed management under conservation agriculture in vegetable-based cropping system

Dr. Raghwendra Singh

Discussion and concluding remarks by Chair

POSTERS/Tea **Date/(time): 20/12/2022 (17:30-18:00)**

General Body Meeting of ISWS **Date/(time): 20/12/2022 (18:00-19:00)**

Gala Dinner (Sponsored by AAU, Anand) **Date/(time): 20/12/2022 (19:00-21:00)**

Wednesday, December 21, 2022

Venue: Main Hall **Date/(time): 21/12/2022 (9:30-11:00)**

Chair: **Dr NT Yaduraju**

Co-Chair: **Dr TK Das**

Rapporteur: **Dr PK Mukherjee & Dr Malay K Bhowmick**

Sustainable weed management in rice-wheat systems: Myth and reality

Dr RK Malik

Plenary lecture

Current herbicide development scenario: Need to launch reduced risk herbicides

Dr Shoumo Mitra

Plenary lecture

Discussion and concluding remarks by Chair

POSTERS/Tea **Date/(time): 21/12/2022 (11:00-11:15)**

TECHNICAL SESSIONS

(Concurrent Sessions in Main Hall, Hall 1 and Hall 2)

Venue: Main Hall

Date/(time): 21/12/2022 (11:15-13:15)

TECHNICAL SESSION 4: Herbicide residues, monitoring, mitigation and effect on non-target organisms in weed management

Chair: **Dr Samunder Singh**

Rapporteurs: **Dr Yogita Gharde & Dr Mini Abraham**

Herbicides residues in soil, water and plants: Mitigation challenges and the future perspectives

Dr A Ramesh

Lead lecture

Pesticide residue analysis challenges: An overview

Dr Neelam Sharma

Invited oral lecture

Determination of ready-mix herbicides residue in soybean cultivated tropical inceptisol

Dr P Janaki

Invited oral lecture

Impact of post-emergence herbicides on soil micro flora In transplanted rice

Dr P Sudhakar

Bioremediation of Pretilachlor by bacterial consortia from polluted soils of Assam

Dr Kaberi Mahanta

Residues and persistence of pendimethalin 38.7% CS in chickpea

Dr Kaushikkumar Parmar

Effect of herbicide on soil biochemical properties under varying level of crop, nutrient and herbicide dose in wheat under vertisols of Central India

Dr Dibakar Roy

Residue status of diclosulam 84% WG in soybean

Dr Nitesh Litoriya

Cereal rye residue effects on the germination of troublesome weeds in the Southern United States

Miss Annu Kumari

Weed dynamics and atraine residue in green fodder and silage of spring maize (Zea mays L.) grown under different cropping systems in north-west India

Mr Navjot Brar

Residue status of pre-emergence application of pendimethalin in cumin and soil of bhal region of middle Gujarat

Mr NR Chauhan

Discussion and concluding remarks by Chair

Venue: Hall 1

Date/(time): 21/12/2022 (11:15-13:15)

TECHNICAL SESSION 5: Non-chemical weed management including biological control

Chair: **Dr Mahesh K Upadhayaya**

Rapporteur: **Dr CR Chethan & Dr Rishi Raj**

Botanical herbicides for eco-friendly weed management and sustainability of smallholder farming

Dr RK Ghosh

Lead lecture

Bio efficacy of mycoherbicides against alien invasive weeds Parthenium, Lantana and Water hyacinth: Commercialization perspectives

Dr Ajay Kumar Singh

Lead lecture

Weed management in organic farming – A review

Dr Ravikant R Upasani

Invited oral lecture

Weed management under organic production system of rice-vegetable pea-sweet corn cropping system

Dr Shailendra Pratap Singh

Mulch based weed management strategies in organic baby Corn-Cabbage cropping system

Dr Bhimireddy Padmaja

Weed management in soybean-gram sequence in organic production under irrigated condition

Dr Asha Chavan

Evaluation of phyto-extracts for weed management in sweet corn under organic production

Mr Kiran Emmiganur

The mycobiota associated with the weed water hyacinth Pontederia crassipes in Kolkata, India, with prominence on biological control of the macrophyte

Dr Writuparna Dutta

Discussion and concluding remarks by Chair

Venue: Hall 2

Date/(time): 21/12/2022 (11:15-13:15)

TECHNICAL SESSION 6: Weed management in pulses

Chair: **Dr LS Brar**

Rapporteur: **Dr Simerjeet Kaur & Dr Sheela Barla**

Weed management in pulse crops: challenges and opportunities

Dr Narendra Kumar

Lead lecture

Weed dynamics, weed control efficiency, yield attributes and yields of chickpea in response to pre- and post- emergence application of herbicides

Dr Dinesh Sah

Invited oral lecture

Post-emergence herbicides for weed management in greengram

Dr Tej Pratap

Invited oral lecture

Response of weed dynamics, growth and yield of mungbean to different post-emergence herbicides

Dr ML Mehriya

Effect of integrated weed management on weed dynamics in blackgram

Dr Lanunola Tzudir

Effect of integrated weed management practices on weed dynamics and productivity of long duration pigeonpea

Dr Indubhushan Pandey

Weed management in pigeonpea + greengram cropping system

Dr N Ananda

Weed Management for major rabi crops (Wheat, chickpea and coriander) of Saurashtra Region-Gujarat

Dr BS Gohil

Selection of herbicides on weed control in greengram cultivation in Bangladesh

Dr Md. Omar Ali

Discussion and concluding remarks by Chair

Lunch/Posters

Date/(time): 21/12/2022 (13:15-14:00)

Venue: Main Hall

Date/(time): 21/12/2022 (14:00-15:30)

Chair: **Dr RK Malik**

Co-Chair: **Dr RK Ghosh**

Rapporteur: **Dr Mukesh Kumar & Dr P Saravanane**

Increasing problems of alien invasive weeds in the world: Management challenges and future perspectives

Dr RM Kathiresan

Plenary lecture

Weed biology and ecology: an important science to make strategies for weed management

Dr BS Chauhan

Plenary lecture

Discussion and concluding remarks by Chair

High Tea and Poster Sessions

Date/(time): 21/12/2022 (15:30-15:45)

TECHNICAL SESSIONS

(Concurrent Sessions in Main Hall, Hall 1 and Hall 2)

Venue: Main Hall

Date/(time): 21/12/2022 (15:45-18:00)

TECHNICAL SESSION 7: Weed management in rice-based cropping system

Chair: **Dr AN Rao**

Rapporteur: **Dr Bhimoreddy Padmaja & Dr Kaberi Mahanta**

Weed Management in smallholder rice production in Asia: Challenges and Opportunities

Dr Virender Kumar

Lead lecture

Sustainability in rice ecosystem with Direct-Seeded Rice and emerging opportunity of carbon farming

Dr Pardeep Kumar

Lead lecture

Herbicide mixtures in rice

Dr Atluri S Rao

Invited oral lecture

Crop diversification and residue mulching for weed management in rice-wheat cropping system

Dr Manoj Kumar Singh

Invited oral lecture

Weed management in direct seeded rice

Dr MT Sanjay

Managing weeds with competitive varieties in upland direct seeded autumn rice in Assam

Dr Iswar Chandra Barua

Impact of tillage and weed management options on soil quality in rice-maize-Sesbania cropping system under conservation agriculture

Dr Ramprakash Tata

Harnessing potentials of weed-competitive rice cultivars under direct-seeded conditions

Dr Malay K Bhowmick

Weed competitive ability and crop productivity of rice cultivars as influenced by weed management practices under transplanted condition

Dr Rakesh Kumar

Tillage, residue and herbicides effects on weed and nematode dynamics, herbicide residue and productivity in a long-term CA-based direct-seeded rice

Dr Rishi Raj

Response of black rice to date of transplanting and integrated weed management under SRI

Dr Debika Nongmaithem

Bio-efficacy of tank mixed herbicides with urea in wet seeded rice

Dr Thumu Venkateswara Reddy

Evaluation of suitable weed management practices for semi-dry rice

Dr Y Sreeja

Influence of integrated nutrient and weed management on yield and weed dynamics of semi dry rice

Dr Kesipreddy Naganjali

Management of complex weed flora of dry direct-seeded rice with sequential use of herbicides under different tillage practices in eastern India

Mr Deepak Kumar Jaiswal

Discussion and concluding remarks by Chair

TECHNICAL SESSION 8: Herbicide resistance in weeds, herbicide tolerant crops and weed utilization

Chair: **Dr RM Kathiresan**

Rapporteur: **Dr Dasari Sreekanth & Dr Sonaka Ghosh**

Pollen-mediated gene flow and transfer of herbicide-resistant alleles from herbicide-resistant to susceptible weeds

Dr Amit J Jhala

Lead lecture

Pros and Cons of Herbicide Tolerant Crops in Indian Agriculture

Dr C Chinnusamy

Lead lecture

People Participatory Model for Value Addition & Utilization of Invasive Aquatic Weeds, with special reference to Water Hyacinth

Dr G Nagendra Prabhu

Lead lecture

Performance of weedy plants in decentralized constructed wetland systems and their potential of post-harvest biomass utilization for bio-energy production

Dr PJ Khankhane

Invited oral lecture

Performance of imazethapyr doses and sequences against weeds in imidazolinone-tolerant dry direct seeded rice

Dr Dharam Bir Yadav

Invited oral lecture

Studies on the molecular basis of Imazethapyr resistance in Commelina spp. and Echinochloa colona

Dr Deepak Pawar

Management of resistant Phalaris minor in wheat in north-western Indo-Gangetic Plains of India

Dr Todar Mal Poonia

Impact of various Depth of planting and Salvinia molesta compost on rice

Dr P Anandan

Investigations on herbicide resistance in Echinochloa colona and their management strategies under direct seeded rice

Mr Kommireddy Poojitha

Decontamination of heavy metal polluted environment utilizing a wide spread invasive taxa Prosopis juliflora in Southern India

Mr Akil Prasath RV

Discussion and concluding remarks by Chair

Venue: Hall 2

Date/(time): 21/12/2022 (15:45-18:00)

TECHNICAL SESSION 9: An industry perspective on weed management strategies for sustainable agriculture

Chair: **Dr JS Mishra**, Director, ICAR-DWR

Rapporteur: **Partha Baruah & Sunil Kumar**

Dr Mayank Yadav, Convenor, Introduction to the session (verbal)

Drone Application Technology: A new paradigm and opportunities for Weed Management

Mr Rajvir Rathi, (Director, Public Affairs, Science and Sustainability, Bayer CropScience Ltd.)

Remarks from the experts on Drone Application Technology and its scope in Weed Management (verbal input only- no presentations)

Dr Anil Kakkar (Sumitomo)

Dr Pardeep Kulkarni (ADAMA)

Dr N Muthukumar

Dr NT Yaduraju

Emerging challenges with Herbicide usage in India: Current status and future prospects

Mr Rahul Dhanuka (COO, Dhanuka Agritech Ltd)

Remarks from the experts on current status of herbicide usage in India and future prospects (Verbal input only- no presentations)

Dr Ajit Kumar (UPL)

Dr Chakraddhar Pal (PI Industries)

Dr RK Malik

Dr Samunder Singh

Dr Shobha Sondhia

Brainstorming interaction and Conclusion

All participants/ Coordinated by Convener

Remarks from the Chair: **Dr JS Mishra**

POSTERS/Tea

Date/(time): 21/12/2022 (18:00-18:30)

Cultural programme organized by AAU

Date/(time): 21/12/2022 (18:30-19:30)

Dinner

Date/(time): 21/12/2022 (19:30-21:00)

Thursday, December 22, 2022

Venue: Main Hall

Date/(time): 22/12/2022 (9:30-11:00)

Chair: Dr Prashant Bhowmick

Co-Chair: Dr Muthu Bagavathiannan

Rapporteur: Dr Doddaga Subramanyam & Dr Manoj Kumar Singh

GM and non-GM herbicide tolerant crops: current status, challenges and perspectives

Dr NT Yaduraju

Plenary lecture

Do we see the end of chemical weed control soon?

Dr Samunder Singh

Plenary lecture

Tea and Poster Sessions

Date/(time): 22/12/2022 (11:00-11:15)

TECHNICAL SESSIONS

(Concurrent Sessions in Main Hall, Hall 1 and Hall 2)

Venue: Main Hall

Date/(time): 22/12/2022 (11:15-15:00)

TECHNICAL SESSION 10: Weed biology, ecology and climate change

Chair: Dr C Chinnusamy

Rapporteur: Dr BR Bazaya & Dr Sheeja K Raj

Ecology and management of wild oats under Australian conditions

Dr Gulshan Mahajan

Lead lecture

Stealing the secrets of weeds: The stress tolerance mechanism and implication for climate resilient agriculture

Dr Mirza Hasanuzzaman

Lead lecture

Biology, invasiveness and management of panicum repens Linn. (Family: Poaceae)

Dr Jayanta Deka

Invited oral lecture

Study on emergence pattern of Physalis minima L. under different tillage systems

Dr Pijush Kanti Mukherjee

Invited oral lecture

Ecology of weeds in rice fields: A prerequisite for weed management

13:00-14:00 Lunch / Posters

Dr Veenapani Dubey

Ecology and biology of nutsedge

Dr Tushar Patel

Comparative study of soil weed seed bank under different cropping systems of northwestern India

Dr Fayaz Ahmed Bahar

Weed dynamics as affected by different cropping systems in the irrigated midlands of Eastern Region

Dr Sanjeev Kumar

Effect of irrigation methods and herbicides on weed flora dynamics in direct-seeded rice

Dr Ramphool Puniya

Correlation and regression analysis of Rabi maize - weed ecosystem

Dr GN Motaka

*Restriction of *Cyperus rotundus* population in turf (*Cynodon dactylon*)*

Dr Gaurang Patel

*Germination ecology and influence of length and orientation of stolon fragments on invasiveness of *Alternanthera bettzickiana**

Mrs Teresa Alex

*Study on biology of *Echinochloa colona* (L.) Link under direct-seeded rice*

Miss Sonali Singh

*Allelopathic effect of aqueous root leachates of *Echinochloa colonum* (L.) Link on seed germination and seedling growth of rice*

Mrs Pooja Pandey

Weed flora shift and wheat competitiveness under nitrogen levels

Mrs Shanti Devi Bamboriya

Discussion and concluding remarks by Chair

Venue: Hall 1

Date/(time): 22/12/2022 (11:15-15:00)

TECHNICAL SESSION 11: Weed management in cash crops and minor crops

Chair: **Dr AS Rao**

Rapporteur: **Dr Amit Kuamr Jha & Dr Veeresh Hatti**

Weed management in millets: Challenges and perspectives

Dr RP Dubey

Lead lecture

Weed control efficacy of herbicide mixtures on major weed flora of cotton in Cauvery Command Area of Karnataka

Dr SB Yogananda

Invited oral lecture

Integrated Weed Management in Bt Cotton

Dr Vrajdas Usadadia

Evaluation of post-emergence herbicide in foxtail millet

Dr Kamala Bai

Influence of herbicides and agri-horti systems on growth and yield of finger millet under semi-arid condition of eastern Uttar Pradesh

Dr Manoj Kumar Singh

13:00-14:00 Lunch / Posters

Evaluation of bio-efficacy of herbicide, Atrazine 50% WP against major weed species in sugarcane with its phytotoxicity effect on sugarcane and residual effect on the succeeding Cowpea crop

Dr Rajendra Hasure

Tank mix application of Halosulfuron-methyl and Metribuzin against major weed flora of Sugarcane in Cauvery Command Area of Karnataka

Dr P Thimmegowda

Non- chemical weed management in fenugreek

Dr Roshan Choudhary

Effect of herbicides on weed dynamics and yield of finger millet

Dr Sheela Barla

Weed management in sugarcane through ready-mix post-emergence herbicides

Dr Sunilkumar Nooli

Integrated Weed Management in Taro

Dr Suresh Kumar J

Integrated weed management in coriander and residual effect of herbicides on succeeding greengram crop

Dr Shaileshbhai Mulchandbhai Patel

Weed flora of cotton – A review

Dr K Nalini

Effect of various weed control treatments on different weed species of Mentha under Punjab Conditions

Miss Gurleen Kaur

Efficacy of different weed management practices on weed density and seed yield of dill

Miss Ruchika Choudhary

Weed management in foxtail millet with pre-and post-emergence herbicides

Mrs Pokala Sravani

Discussion and concluding remarks by Chair

Venue: Hall 2

Date/(time): 22/12/2022 (11:15-15:00)

TECHNICAL SESSION 12: Weed threat to biodiversity in forest, wasteland and aquatic ecosystem and socio-economic implications

Chair: **Dr CT Abraham**

Rapporteur: **Dr Tej Pratap & Mr Navjot Brar**

Need of South Asia Regional Network for Invasive Alien Species (SARNIAS)

Dr Bharat B Shrestha

Lead lecture

Weed mediated bioremediation of contaminants of environmental concern using a circular bioeconomy

Dr Kishore Kumar Krishnani

Invited oral lecture

Management of salvinia (*Salvinia molesta* Mitch.) in rice ecosystem

Dr P Prameela

Invited oral lecture

13:00-14:00 Lunch / Posters

Florpyrauxifen-benzyl for the Management of Aquatic Weeds in Wetland Rice

Dr Nimmy Jose

*Dragon scale fern (*Pyrrossia* sp.), a problematic epiphyte fern in plantations of Periyar river basin in Kerala*

Dr Mini Abraham

*Does change in carbon dioxide level influence salinity tolerance to *Parthenium*?*

Dr P Saravanane

*Predicting the potential risk of littleseed canarygrass (*Phalaris minor*) in India under future climatic scenarios*

Dr Yogita Gharde

*Evaluating the impact of *Lantana camara* removal on native biodiversity, regeneration status and soil quality in three agro-climatic zones of Chhattisgarh, India*

Mr Ajin Sekhar

Approaches for Integrated Weed Management System

Dr Archana Sharma

*Impact of invasive shrub, *Lantana camara*, removal on biological properties of soil in Chhattisgarh Forest*

Dr Himanshu Mahawar

Trend analysis of production and consumption of key herbicides in India

Mr A Jamaludheen

Weed Management Aspects of the United States Turfgrass Industry: Current Scenario and Future Outlook

Mr Navdeep Godara

Mapping and habitat affinity of greater club rush in wetland rice fields of Vellayani lake watershed

P. Gayathri Karthikeyan

Discussion and concluding remarks by Chair

Tea and Poster Sessions

Date/(time): 22/12/2022 (15:00-15:15)

Venue: Main Hall

Date/(time): 22/12/2022 (15:15-16:00)

Chair: **Dr Yoshiharu FUJII**

Co-Chair: **Dr Pratap Singh**

Rapporteur: **Dr MT Sanjay & Dr Amit Jhala**

Current status of biological control of weeds and future perspectives

Dr Martin P Hill (Mahesh K Upadhaya Award Lecture)

Plenary lecture

Discussion and concluding remarks by Chair

Closing ceremony**Date/(time): 22/12/2022 (16:00-17:00)**

- Presentation of Technical session Reports: Rapporteurs
- Award Certificate to Student Travel Grant by **Dr VK Choudhary**
- Declaration of poster session Awards: **Dr JS Mishra**, Organizing Secretary 3rd IWC
- Remarks: by **Dr Sushilkumar**, Convenor, 3rd IWC
- Address: **Chief Guest**
- Vote of thanks: **Dr JS Mishra**, Organizing Secretary 3rd IWC

High Tea**Date/(time): 22/12/2022 (17:00-17:30)****Friday, December 23, 2022****Breakfast****Date/(time): 23/12/2022 (8:00-9:00)****FIELD AND 'STATUE OF UNITY' VISITS****Date/(time): 23/12/2022 (9:00-19:00)**

Poster Presentations

Day/Date	Poster numbers
Day 1: 20 th December 2022	P-01-86
Day 2: 21 st December 2022	P-87-162
Day 3: 22 nd December 2022	P-163-220

Posters should be displayed in the designated area from 9.00 AM to 6.30 PM on the scheduled days only. Kindly note your poster number from the list given in the following pages.

Guidelines for poster presentations

- 1) Please use the designed 3rd International Weed Conference poster template. Make your title short to summarize the message of the research. Keep references to a minimum
- 2) Prepare your poster to fit in dimensions of Width: 75 cm, Height: 100 cm. It is recommended that the poster be printed on one continuous sheet. The dimensions of the poster should not exceed size.
- 3) Make sure to keep a blank circular space to mention the poster number at the upper right corner of your printed poster.
- 4) Poster number has been given in the 'Technical Program' booklet.
- 5) Allocate the top of the poster for the title and authors as stated on the submitted abstract.
- 6) The text, illustrations, *etc.* should be big enough to be read from a distance of two meters. Use just one or two colours on a plain coloured background. Avoid capital letters, except at the beginning of sentences and for proper nouns. Avoid underlining; this implies it is a link to the subject. Use bolder, larger typeface for the main titles and headings. It can be effective to use a different typeface for headings and subheadings. To emphasize body text, use a bold font. Put the conclusions at the bottom of the poster before recreation. Do not use even justification of the column text if there are few words to a line. Be selective in your use of bullet points, perhaps only in the conclusion.
- 7) Materials (such as double-sided tape) will be available for mounting posters.

TECHNICAL SESSION 1

New ways to deal with weeds, *i.e.* new technologies

- P-1 Weed interference, wheat productivity, and soil properties under a conservation agriculture-based pigeon pea-wheat system
–Tarun Sharma, T.K. Das, Susama Sudhishri, Prabhu Govindasamy, Sunanda Biswas, Pragati Pramanik Maity, Rishi Raj, Suman Sen and Arkaprava Roy
- P-2 Phytotoxic activity of essential oils and aqueous extract of medicinal and aromatic plants on *Phalaris minor*
–Pooja Maurya, Iffat Zareen Ahmad, Priyanka Suryavanshi
- P-3 CRISPR/Cas9-mediated genome editing: An important tool for development of herbicide resistant crops
–Paras, Samunder Singh and Sunil
- P-4 Nanotechnology in weed science
–Bhavik J. Prajapati, K.C. Patel, V.J. Patel and Dileepkumar
- P-5 Weed management in intensive cropping systems - A review
–S.M. Bambhaneeya, Vaishali Surve and S.P. Deshmukh
- P-6 Mycoherbicides: An ecological and sustainable approach to weed management
–Gourav Chahal
- P-7 Weed preservation technique
–S.K. Parmar, B.B. Tandel, R.M. Pankhaniya and V.P. Usadadiya
- P-8 Deciphering plant growth promotion potential of native atrazine degrading bacteria
–H.K. Patel, T.M. Patel, Y.K. Jhala and D.D. Chaudhary
- P-9 Using nanoparticles to improve the absorption and translocation of glyphosate in purple nutsedge tubers
–K. Srimathi and C.R. Chinnamuthu
- P-10 Nanoencapsulation of herbicide: A new window for protected application
–Pooja A. Patel and P.P. Chaudhari
- P-11 Encapsulated herbicides: A novel approach for efficient and environmentally friendly weed management
–P.P. Chaudhari, Pooja A. Patel, Veeresh Hatti
- P-12 Sustainable approach to weed management: The role of precision weed management
–Anju Bijarnia
- P-13 Nano encapsulated herbicide formulations as a novel method to manage weeds in the rainfed groundnut
–S. Swetha, C.R. Chinnamuthu, P. Murali Arthanari, S. Marimuthu, A. Senthil
- P-14 Multilanguage mobile app (HerbCal) for herbicide calculations
–Sandeep Dhagat, V.K. Choudhary, P.K. Singh and Daud Raza Khan

- P-15 Herbicide resistant crops: significance and future perspectives in innovative agriculture age
–Sunita Meher, Sanjoy Saha, Nitish Tiwari, Ashirbachan Mahapatra and Debasis Das
- P-16 A LC-MS/MS based single laboratory validated method for extraction, clean up and quantification of monomer/cross linker of hydrogel in soil matrix
–Harshang Talaviya, Tirthankar Banerjee, Anupama Singh, Neera Singh, Suman Manna
- P-17 Power Harrow: One of the best alternatives for control of *Commelina spp* infected Soybean field of Malwa region of MP
–Jitendra Patidar, M.L. Kewat, Shobha Sondhia, D.S. Sasode and Varsha Gupta

TECHNICAL SESSION 2

Weed management in cereals-based cropping system

- P-18 A review of weed management in India: The need of sustainable weed management
–Vaishali Surve, A.D. Raj, Suresh Bambhaneeya and Swapnil Deshmukh
- P-19 Comparison of the production and weed control efficiency in different rice residue management technologies for wheat
–Raminder Kaur Hundal and Bikramjit Singh
- P-20 Effect of sorghum extract and herbicide on weed dynamics and yield of wheat
–Devi Lal Kikraliya, U.N. Shukla and K.K. Bijarnia
- P-21 Integrated weed management in *Rabi* maize under zero tillage condition
–D.K. Roy
- P-22 Critical period of weed control in *Rabi* maize on heavy black soil of south Gujarat
–H.M. Virdia and J.D. Thanki
- P-23 Influence of spray fluid quality on weed control efficiency of different post-emergence herbicides and growth parameters in *Rabi* maize
–K. Bhavitha, K. Suresh, T. Ram Prakash and M. Madhavi
- P-24 Unified weed management in *Rabi* pop corn
–P. Patel and H. N. Chaudhary
- P-25 Effect of crop establishment methods and weed management practices on weed dynamics, productivity, energy budgeting and soil health in maize-wheat-green gram cropping system
–Narendra Kumar, V.K. Choudhary, M.P. Sahu and A.K. Patel
- P-26 Integrated weed management practices on quality and economics of wheat
–Kalyani S Raut, P.P. Pawar, Shubhangi N. Powar and S. M. Dhadge
- P-27 Tillage and mulch load influences weed severity, system productivity, and root and soil cracks behaviour in rice-wheat-green gram cropping system
–V.K. Choudhary, R.P. Dubey, P.K. Singh and J.S. Mishra

- P-28 Integrated weed management in *Rabi* popcorn with new generation herbicides
–H.N. Chaudhary, A.P. Patel, A.N. Chaudhary and R.H. Patel
- P-29 Organic weed management in major field crops
–Narendra Kumar Bhinda and Adarsh Sharma
- P-30 Bio-efficacy of pinoxaden on weeds and yield of wheat
–Raghav Patel, A.K. Jha, Rahul Kumbhare, Badal Verma, Sourabh Raghuwanshi and Indra Raj Yadav
- P-31 Impact of sustainable weed management practices under varied nutrient management practices in maize
–Kadiri Saimaheswari, G. Karuna Sagar, V. Chandrika and P. Sudhakar
- P-32 Efficacy of herbicides and their combinations on weeds and effect on growth and yield of maize in North-Western Himalayan region of Himachal Pradesh
–Gurudev Singh, Vinod Sharma, Sandeep Manuja, and Akashdeep Singh
- P-33 Organic weed management in sweet corn
–Ashish Raja Jangid
- P-34 Effect of irrigation scheduling on weeds under different sowing dates in wheat in vertisol
–Mrinali Gajbhiye, Manish Bhan, K.K. Agrawal
- P-35 Chemical weed control in barley
–Anchal Karol, Ashish Kumar Sharma and Meenakshi Meena
- P-36 Sole and sequential application of herbicides on weeds and productivity of *Kharif* maize
–Gharsiram, Mukesh Kumar, Pradeep Kumar
- P-37 Weed assessment under different fertilizer and irrigation levels among sowing dates in wheat
–K.K. Agrawal, Princy Jain, Manish Bhan
- P-38 Efficacy of herbicides against complex weed flora in maize
–Vikash Kumar, D.R. Patel, Veeresh Hatti, J.R. Patel, D.M. Patel and M.G. Chaudhary
- P-39 Maize productivity as affected by different crop establishment methods and weed control options in maize-wheat cropping system
–Sunil Kumar and Ramanjit Kaur
- P-40 Effect of integrated weed management on winter season maize
–V.G. Bavalgave, V.P. Usdadia, N.N. Gudadhe and M.S. Dudhat
- P-41 Influence of sustainable weed management practices on growth and yield of maize
–R. Chethan, G. Karuna Sagar, B. Sandhya Rani and CH. Bharghava Rami Reddy
- P-42 Weed management approaches for rice–wheat system
–Kajal Verma, U.P. Singh, Anurag Upadhyay and Sitesh Jha

- P-43 Enhancement of productivity and profitability of wheat with integrated weed management
–T. Sudha
- P-44 Residual herbicidal effect of diuron on succeeding chickpea in maize–chickpea sequence cropping
–S. Rajkumara
- P-45 Effect of 2,4-D Sodium salt 80% WP on weeds, productivity and economics of *Rabi* hybrid maize
–Shivam Kumar, Pratik Sanodiya and Sudhir Kumar Rajpoot
- P-46 Chemical weed management practices on growth and yield of sweet corn
–S.C. Wadile, Prashant P. Pawar, B.S. Gunjal, S.M. Dhadge and P.P. Girase
- P-47 Effect of different herbicides on growth and yield of wheat
–Parthendu Poddar, Pratonu Bandyopadhyay and Subhankar Saha
- P-48 Nutrient uptake by weed and wheat as influenced by different weed management practices
–Utkarsh Singh, Anil Kumar Singh, Sudhir Kumar Rajpoot, Tejbal Singh and Vishwa Vijay Raghuvanshi
- P-49 Chemical weed management in maize and its residual effect of herbicides on succeeding mustard
–Sapna Bhagat, Anil Kumar, R. Puniya and Ashu Sharma

TECHNICAL SESSION 3

Weed management in oilseeds and vegetable crops

- P-50 Effect of herbicides on soil microflora of soybean on vertisol soil under south eastern Rajasthan
–Uditi Dhakad, D.L. Yadav, Baldev Ram, R.K. Yadav, Chaman K. Jadon and Pratap Singh
- P-51 Efficacy of ethalfluralin against weeds in soybean grown in Rajasthan
–Pratap Singh, Chaman Kumari Jadon, S.L. Yadav, S.N. Meena and Uditi Dhakad
- P-52 Effect of weed management practices in soybean-pigeonpea intercropping system and its residual effect on succeeding crops
–R.V. Hajari, G.J. Patel and R.G. Machhar
- P-53 Potential of weed seedbank dynamics and evaluation of some new post-emergence herbicides and their mixtures for weed control in soybean and their residual effect on wheat
–V.V. Rupareliya, Y.H. Ghelani, B.S. Gohil and S.R. Asalaliya
- P-54 Evaluation of herbicides along with bio-stimulant on weed occurrence and economics of soybean under vertisols of Chhattisgarh
–Harendra Kumar, Rama Mohan Savu and Nitish Tiwari

- P-55 Efficacy of various herbicides to manage weeds in soybean
–G. Vanisree, V.S. Khawale, Jakku Prasanna, N.D. Parlawar and D.J. Jiotode
- P-56 Major weeds of soybean and their management in Kota region of Rajasthan
–Bharat Lal Meena, D.S. Meena and Gajendra Nagar
- P-57 Weed dynamics, yield and economics of soybean as affected by integrated nutrient and weed management practices
–Meshenji Apon and D. Nongmaithem
- P-58 Influence of weed management on productivity of soybean in northern India
–Rakesh Dawar, Subham Birla and Ramswoop Bana
- P-59 Effect of ethalfluralin % EC on growth parameters and yield of soybean
–Parita, Suresh Kumar, S.S. Rana, Neelam Sharma and Sandeep Manuja
- P-60 Determining pendimethalin residues in irrigated wheat mulched with soybean residue
–Gugulothu Sumitra, S. Rajkumara and Kumar D. Lamani
- P-61 Bio-efficacy of newer ready-mix herbicides on weed dynamics, soil enzymes, microflora, nodulation activities, nutrient depletion, yield and economics of soybean and their residual effect on succeeding coriander, chickpea and wheat
–Uditi Dhakad, Baldev Ram, Chaman K. Jadon, R.K. Yadav, D.L. Yadav, S.L. Yadav and B.K. Patidar
- P-62 Weed flora in soybean as influenced by weather parameters and weed management practices
–S.U. Pawar, R.O. Padre, J.D. Gaikwad and B.V. Asewar
- P-63 Bio-efficacy of herbicides on weed management in groundnut under rice-groundnut system in coastal zone of Karnataka
–Kunal Narwal
- P-64 Effect of pre- and post-emergence herbicides on weeds and yield of summer groundnut
–T.G. Lakshmidevi, V.J. Patel, S.N. Shah and D.D. Chaudhari
- P-65 Evaluation of suitable herbicides for efficient weed control in irrigated groundnut at Puducherry Region
–S. Ravi R. Narasimman and H. Jakir Hussain
- P-66 Efficacy of pre- and post-emergence herbicides on weed management in groundnut
–Priyanka and M.L. Mehriya
- P-67 Integrated weed management in groundnut
–Praveen Kumar Nitharwal, Sunita and Ashish Kumar Sharma, Sarita
- P-68 Effect of weed management on weed, yield attributes and yield of groundnut
–D.M. Patel, J.R. Patel, M.G. Chaudhary, Veeresh Hatti and Vikash Kumar
- P-69 Efficacy of new herbicide molecules for weed management in groundnut
–Veeresh Hatti, Prakash Rabari, V. Kumar, J.R. Patel, D.M. Patel and M.G. Chaudhary
- P-70 Effect of different weed management practices and fertility levels on weed dynamics in groundnut
–Swapnashree Sahoo, Satyananda Jena, Manoranjan Satapathy and J. Mishra

- P-71 Effect of integrated weed management in linseed under South Gujarat condition
–*L.J. Desai and P.H. Kalal*
- P-72 Management of chocolate weed (*Melochia corchorifolia* L.) in sesame
–*Sheeja K Raj, Dhanu Unnikrishnan, D. Jacob and P. Shalini Pillai*
- P-73 Growth, yield and quality of sesame as influenced by nitrogen levels and weed management practices under south Gujarat condition
–*Harsh A. Kamani, V.G. Bavalgave and Vikram N. Shiya*
- P-74 Effect of weed management practices on weed dynamics and yield performance of castor
–*A.L. Jat, S.K. Shah, F.K. Chaudhary and L.D. Parmar*
- P-74 Enhancing productivity and profitability through integrated weed management in summer
–*B. Navyashika, D. Jacob and Sheeja K Raj*
- P-76 Effect of weed competition period on growth and yield of grain Amaranth
–*R.H. Kotadiya and D.J. Patel*
- P-77 Yield, economics and quality of grain amaranth (*Amaranthus hypochondriacus* L.) influenced by integrated weed management
–*J.S. Desai, A.N. Chaudhary, C.K. Desai and M.H. Chavda*
- P-78 Integrated weed management in summer sesame
–*D.D. Patel, C.P. Patel, T.U. Patel and H.H. Patel*
- P-79 Evaluation of pre- and post-emergence herbicides for weed management in sesame
–*K.R. Chavhan, H.H. Mahajan and K.B. Patil*
- P-80 Effect of pre-emergence herbicide, pendimethalin, on the management of *Cuscuta* in Niger (*Guizotia abyssinica*)
–*Suryakant Nagre, Anil Kurmi, S.K. Pandey, S.K. Rathour and Anita Thakur*
- P-81 Productivity and profitability of clusterbean as influenced by weed management practices
–*B.L. Dudwal, A.C. Shivran, B.R. Meena and S.K. Dudwal*
- P-82 Effect of pre-plant application of post-emergence herbicide glyphosate formulations on weeds and crops in the tomato-blackgram cropping sequence
–*M. Keerthana, C.R. Chinnamuthu, P. Murali Arthanari and N. Sakthivel*
- P-83 Effect of herbicides applied with and without FYM for weed management in onion
–*Sagar P. Kadu, B.D. Patel, V.J. Patel and D.D. Chaudhari*
- P-84 Weed management strategy for onion nursery
–*D.D. Chaudhari, V.J. Patel, H.K. Patel and B.D. Patel*
- P-85 Effect of weed management and phosphorus fertilization practices on productivity of cowpea
–*Kashinath Gurusiddappa Teli, M.N. Harish*
- P-86 Efficacy of herbicides for weed management in summer cowpea
–*P.V. Parmar, T.U. Patel, C.S. Chaudhary, A.M. Rathod, S.N. Makwana and B.K. Patel*

TECHNICAL SESSION 4

Herbicide residues, monitoring, mitigation and effect on non-target organisms in weed management

- P-87 Screening and monitoring of herbicide residues in rice ecosystem by a new thin layer chromatography (TLC) method
–Shobha Sondhia
- P-88 Long-term effect of conservation agriculture and weed management practices on soil carbon fractions in a vertisol
–K.K. Barman, R.K. Sharma, Dibakar Roy, H.K. Rai and V.K. Chaudhary
- P-89 Harvest time residue of clomazone in soybean
–R. L. Kalasariya, S.H. Patel, K.D. Parmar, N.S. Litoriya, N.N. Chaudhary and P.G. Shah
- P-90 Dissipation of triafamone+ethoxysulfuron in soil under direct seeded and transplanted rice field
–Rajandeep Kaur, Pervinder Kaur and Makhan Singh Bhullar
- P-91 Degradation of mesosulfuron-methyl + iodosulfuron methyl and their transformation products in soil
–Harshdeep Kaur, Pervinder Kaur and Makhan Singh Bhullar
- P-92 Degradation of pyroxasulfone in soils of Punjab
–Akshdeep Kaur, Pervinder Kaur and Makhan Singh Bhullar
- P-93 Effect of herbicide on soil biochemical properties under varying level of crop, nutrient and herbicide dose in wheat under vertisols of Central India
–Dibakar Roy, Vinodh Gaur, Amit Kumar Upadhdai, Himanshu Mahawar and Kamal Kanti Barman
- P-94 Degradation and persistence of herbicides in soil and consequent residues in rice-rice cropping system
–C. Bharathi P. Murali Arthanari and S. Panneerselvam

TECHNICAL SESSION 5

Non-chemical weed management including biological control

- P-95 Expanding invasion of invasive alien aquatic weed *Salvinia molesta* in other parts of India and its successful biological control in Central India
–Sushilkumar
- P-96 Effect of weed management practices in organic production on weed control, yield and economics of soybean-chickpea sequence under irrigated condition
–S.P. Chennaiwad, W.N. Narkhde, S.T. Shirale, and S.N. Sable
- P-97 Non-chemical weed and nutrient management in brinjal
–R.K. Sathe, B.S. Raskar, A.G. Durgude and M.N. Bhalekar

- P-98 Control of *Parthenium hysterophorus* for sustainable farming practices
–*M.G. Chaudhary, Y.B. Vala and M.H. Chavda*
- P-99 Herbicidal activity of mustard essential oil against *Avena ludoviciana* and *Phalaris minor* Retz
–*Poornima and Pervinder Kaur*
- P-100 Intrusion of *Parthenium* and its eco-friendly management: The world most offensive weed
–*Ravi Verma, A.K. Singh, Ekta Singh and Divya Singh*
- P-101 Organic weed management
–*Monika Choudhary and Swati Kunjam*
- P-102 Weed management through mulching: Boon for chickpea production
–*Pradeep Kumar, V.P. Usadadiya, R.K. Mahanta and U.J. Patel*
- P-103 Weed management in organic farming
–*Sunita, Praveen Kumar Nitharwal, Ashish Kumar Sharma, Sarita*
- P-104 Non-chemical weed management in *Rabi* fennel under organic farming conditions
–*M.M. Chaudhary, C.K. Patel and J.D. Bawa*
- P-105 Number dependent population dynamics and damage potential of bioagent *Cyrtobagous salviniae* on water fern *Salvinia molesta*
–*Mukesh Kumar Meena, Sushilkumar and Yogita Gharde*
- P-106 Bio efficacy of mycoherbicides against alien invasive weeds *Parthenium*, *Lantana* and *Water hyacinth*: Commercialization perspectives
–*Ajay Kumar Singh and Praharaju Laxminarayana*
- P-107 Non-chemical weed management in bhendi (*Abelmoschus esculentus* L.)
–*S. Dhivya, R. Kalpana, M.V. Priya and V. Vasumathi*

TECHNICAL SESSION 6

Weed management in pulses

- P-108 Weed management in lentil with mulching and herbicide
–*D.K. Mohanta, B. Duary, K. Naveen Yadav and D.K. Jaiswal*
- P-109 Herbicide-based weed management in urdbean and its carry over effect on succeeding *Rabi* crop
–*Kiran V. Rabari, K.I. Patel, Piyus Saras and Neha V. Patel*
- P-110 Bio-efficacy of new generation herbicides in chickpea
–*G.D. Sanketh, K. Bhanu Rekha, T. Ram Prakash and K.S. Sudhakar*
- P-111 Bioefficacy of new generation herbicides in *Rabi* greengram
–*Y. Chaitanya, B. Padmaja, M. Malla Reddy and T. Srijaya*
- P-112 Effect of pre- and post-emergence herbicides on weeds and yield of summer greengram
–*Pramod Kumar, V.J. Patel, R.A. Patel and D.D. Chaudhari*

- P-113 Bioefficacy of toperamezone on weeds, growth and productivity of chickpea
–Harpreet Kaur Virk and Guriqbal Singh
- P-114 Response of gram to different pre- and post-emergence herbicides under South Gujarat conditions
–V.M. Patel and L.B. Kalasariya
- P-115 Optimum dose and time of application of topramezone for weed management in chickpea
–Gajanand, Sunil Kumar, Devilal Birla, Devendra Singh and R.S. Singh
- P-116 Effect of weed management practices and nitrogen levels on productivity of chickpea
–Adarsh Sharma
- P-117 Effect of tillage and weed management practices on weed dynamics and yield of lentil
–Devilal Birla, I.B. Pandey, Subhra Sahoo, Gajanand, R.S. Singh and S.N. Makwana
- P-118 Integrated weed management in *Kharif* blackgram
–R.G. Machhar, R.V. Hajari and A.K. Mahida
- P-119 Efficacy of pre- and post-emergence herbicides on weed control in blackgram under vertisol
–Suman Dhayal and S.L. Yadav
- P-120 Chemical weed management in pigeonpea
–Ashish Kumar Sharma, Praveen Kumar Nitharwal Sunita, Anju Kanwar Khangarot and Anchal Karol
- P-121 Weed management in blackgram
–H.H. Patel, V.M. Kapadiya, T.U. Patel, and D.D. Patel
- P-122 Efficacy of combined herbicides in summer blackgram
–R.R. Pisal, J.O. Kamaliya and A.P. Patel
- P-123 Evaluation of post-emergence herbicides in greengram
–Ganajaxi Math, Gurupad Balol, Suma Mogali, Iramma V Goudar and Vinita
- P-124 Evaluation of herbicides for weed control in irrigated maize and its impact on soil microflora and their residual effect on succeeding blackgram
–R. Arockia Infant Paul, A. Ammaiappan, G. Srinivasan, R. Thamizh Vendan and A. Veeramani
- P-125 Efficacy of newer post-emergence herbicides for weed management in greengram
–Shankar Lal Yadav, Pratap Singh, R.K. Yadav, Udit Dhaked, G.N. Yadav, Khajan Singh, D.L. Yadav and Kapil Nagar
- P-126 Effect of integrated weed management on weed control and yield of summer greengram
–Y.B. Vala, D.G. Gelot and D.M. Patel
- P-127 Weed seed bank as affected by different mulches and herbicides in summer greengram
–Sumit Kumar, Tarundeep Kaur, Jasvir Singh Gill and Makhan Singh Bhullar

- P-128 Response of chickpea to weed control practices
–Manju Choudhary and Sandeep Kumar Pancholi
- P-129 Integrated weed management: A comprehensive and effective approach of weed management in pluses
–M.H. Chavda

TECHNICAL SESSION 7

Weed management in rice-based cropping system

- P-130 Weed management in dry direct-seeded rice
–D.D. Chaudhari, V.J. Patel A.S. Bhanvadia, and B.D. Patel
- P-131 Weed diversity effect of crop establishment methods and diversified rice-based cropping systems
–Mukesh Kumar, R.K. Jha and B. Pramanick
- P-132 Tillage and weed management practices influence on weed dynamics, growth and yield of direct-seeded rice in rice-wheat-green gram cropping system
–Alpana Kumhare, V.K. Choudhary, M.P. Sahu, Narendra Kumar and Sonali Singh
- P-133 Persistence of clomazone in transplanted rice under open field condition
–N.N. Chaudhary, R.L. Kalasariya, P.P. Solanki and N.R. Chauhan
- P-134 Practices of weed management under direct-seeded rice in coastal deltaic ecosystem
–K. Pooja and P. Saravanane
- P-135 Evaluation of integrated weed management practices in aerobic rice
–D.J. Kotresh, S. Radhamani, P. Murali Arthanari, V. Ravichandran and A. Sangothari
- P-136 Weed management in aerobic rice
–D.K. Patel and K.P. Patel
- P-137 Studies on effective herbicidal weed management practice in direct seeded rice under Western Ghat zone
–H.M. Patil, R.B. Sonowane and S.R. Pardeshi
- P-138 Encapsulation of metsulfuron methyl for long season weed management in transplanted rice
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- P-139 Study of herbicide mixtures, its effect on weed floristic composition and weed indices in wet direct seeded rice
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