

Information Bulletin No. : 21

SOUVENIR

ICAR ZONAL SPORTS TOURNAMENT
(CENTRAL ZONE)

7-11 December, 2015



भाकृअनुप - खरपतवार अनुसंधान निदेशालय
ICAR - Directorate of Weed Research
जबलपुर (मध्य प्रदेश)
Jabalpur (Madhya Pradesh)
ISO 9001 : 2008 Certified





ICAR ZONAL SPORTS TOURNAMENT (Central Zone) -2015

Souvenir

Organized by

ICAR - Directorate of Weed Research
Jabalpur

7-11 December, 2015



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ICAR - Directorate of Weed Research

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ISO 9001 : 2008 Certified





Published by :

Director
ICAR - Directorate of Weed Research, Jabalpur

Compiled & Edited by :

Dr. P. K. Singh
Dr. Meenal Rathore
Dr. Yogita Gharde
Sh. Sandeep Dhagat

Cover Page Design :

Sh. V.K.S. Meshram

Year : December, 2015

From the Director's Desk ...



It is a matter of privilege for this Directorate to organize the ICAR Zonal Sports Tournament at our campus after a gap of 4 years. Previously we organized this event from 15-19 February, 2011, which was hailed as a great success. This tournament will have the participation of 11 ICAR institutes located in central zone and 6 institutes based in New Delhi, involving 461 sportspersons.

This will promote the spirit of togetherness and establish bonding among the staff of the ICAR institutes. I welcome the participants and officials from different institutes to our small and beautiful campus. We are engaged in weed science research, and the participants will also have the opportunity to see our activities in the laboratory as well as in the field, which is primarily based on the principles of conservation agriculture.

Organizing such a mega event requires collective efforts, and my colleagues at the Directorate have been preparing for it for the last few months. I am happy to see that everything has been progressing well and will be ready well before the scheduled dates. The participants will exhibit their skills and potential in the sporting events, and it will be a pleasure to enjoy the tournament for all.

Located at the centre of India and on the bank of holy river Narmada, Jabalpur is known as the marble city as well as 'Sanskardhani' of Madhya Pradesh. It is famous for balance rock, largest statue of Lord Shiva, Bheda Ghat and various other establishments. The participants can take time off to visit the places of interest during their stay. My colleagues at the Directorate will be ready to provide any kind of help and support to the visiting guests, and make their stay enjoyable and memorable.

I am grateful to the ICAR for assigning this responsibility to us and providing all the needed support for organizing this sports tournament. I am sure all the participants will enjoy our hospitality and go back with fond memories of this event.

Date : 1 December, 2015

Place: Jabalpur


(A.R. Sharma)
Director

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संदेश



यह जानकर प्रसन्नता हुई कि भा.कृ.अनु.प.-खरपतवार अनुसंधान निदेशालय जबलपुर, भा.कृ.अनु.प.- खेलकूद प्रतियोगिता (सेन्ट्रल जोन) का आयोजन दिनांक 7 से 11 दिसम्बर, 2015 को हो रहा है ।

मैं कामना करता हूँ कि यह आयोजन सच्ची खेल भावना से परिपूर्ण हो । मैं सभी प्रतिभागियों और आयोजकों को शुभकामना देता हूँ ।

(शरद जैन)

राकेश सिंह

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सत्यमेव जयते

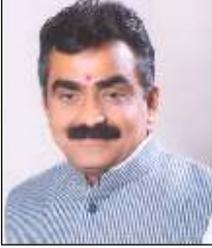
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क्र./2510/सां.लो.जबलपुर,

दिनांक: 28/11/2015



संदेश



भा.कृ.अनु.प.- खरपतवार अनुसंधार निदेशालय जबलपुर द्वारा सेंट्रल जोन स्तरीय खेलकूद प्रतियोगिता का आयोजन किया जा रहा है। अध्ययन-अध्यापन के साथ ही साथ खेलकूद का जीवन में अत्यंत महत्वपूर्ण स्थान है। खेलकूद मात्र व्यायाम नहीं है अपितु इससे मानसिक एवं नेतृत्व के गुणों का भी विकास होता है।

खेलकूद प्रतियोगिता के सफल आयोजन हेतु आयोजक मण्डल एवं प्रतिभागियों को मेरी हार्दिक शुभकामनायें।


(राकेश सिंह)



डा. एस. अय्यप्पन
सचिव एवं महानिदेशक

Dr. S. AYYAPPAN
SECRETARY & DIRECTOR GENERAL

भारत सरकार
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भारतीय कृषि अनुसंधान परिषद्
कृषि एवं किसान कल्याण मंत्रालय, कृषि भवन, नई दिल्ली 110 001

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Message



It is a pleasure to learn that ICAR-Directorate of Weed Research (ICAR-DWR), Jabalpur is hosting the ICAR Zonal Tournament (Central Zone) during 7-11 December, 2015.

I firmly believe that true sportsmanship and healthy competition amongst the participants will be a rewarding experience and will give us a better networking and support system as team mates.

I convey my best wishes for the successful conduct of the Sports Meet.

Dated the 23rd November, 2015
New Delhi

(S. Ayyappan)



डॉ. गुरबचन सिंह

अध्यक्ष

Dr. GURBACHAN SINGH
CHAIRMAN

कृषि वैज्ञानिक चयन मंडल

(भारतीय कृषि अनुसंधान परिषद्)

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Message



It gives me immense pleasure to learn that the ICAR Sports Tournament (Central Zone) is being organized at the ICAR-Directorate of Weed Research, Jabalpur from December 7-11, 2015. This is an occasion which will witness presence of participants from different institutions of ICAR and development of co-operation and networking amongst them. I wish true sportsmanship continues to prevail in the tournament.

I convey my best wishes to the organizers for success in conduct of various events.

(Gurbachan Singh)



डॉ. आलोक कुमार सिक्का
उप महानिदेशक (प्रा सं प्र)

DR. ALOK K. SIKKA
Deputy Director General (NRM)

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Message



I am pleased to note that the ICAR Sports Tournament (Central Zone) 2015 is being organized at the ICAR – Directorate of Weed Research, Jabalpur during 7-11 December, 2015.

I am sure the organizers will successfully conduct the tournament and participants will remember the event as a memorable one. Such sports event also provide an opportunity to strengthen bonds amongst ourselves and reflect team spirit and sportsmanship.

I wish all the participants and the organizers of the sports tournament very good luck and a great success.

November, 2015

(Alok K Sikka)

प्रो. विजय सिंह तोमर
कुलपति

Prof. Vijay Singh Tomar
Vice Chancellor



जवाहरलाल नेहरू कृषि विश्वविद्यालय
कृषि नगर, अधारताल, जबलपुर ४८२००४ (म.प्र.)
Jawaharlal Nehru Krishi Vishwa Vidyalaya
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No. VC/TC/432
Dated: 27/11/2015



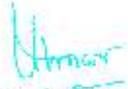
Message



It is a pleasure to learn that ICAR - Directorate of Weed Research, Jabalpur is hosting the ICAR Zonal Tournament (Central Zone) during 7-11 December, 2015.

I am sure that the true sportsmanship and healthy competition amongst the participants in the tournament will be memorable experience and this will provide an opportunity to strengthen bonds amongst them.

I convey my best wishes to all the participants as well as organizers of the event.


(V.S. Tomar)

गुलशन बामरा
कमिश्नर
जबलपुर संभाग



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जबलपुर, दिनांक: 24-11-2015



संदेश



भा.कृ.अनु.प.- खरपतवार अनुसंधान निदेशालय, जबलपुर द्वारा दूसरी बार भा.कृ. अनु.प. खेलकूद प्रतियोगिता(सेन्ट्रल जोन) का आयोजन 7-11 दिसम्बर, 2015 को किया जा रहा है।

यह जानकर खुशी हुई कि इस बार भी भारी संख्या में प्रतिभागी शामिल हो रहे हैं। आशा करता हूं सभी प्रतिभागियों में स्वस्थ प्रतिस्पर्धा रहेगी और सच्ची खेल भावना से ओत-प्रोत यह आयोजन सफल रहेगा।

सभी आयोजकों और प्रतिभागियों को मेरी शुभकामनाएं।


(गुलशन बामरा)

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1. Opening Ceremony

PROGRAMME

Venue: Sports Ground, ICAR-DWR, Jabalpur (M.P.)

Date : 07-12-2015

Assembly of participants	9.00 AM
Arrival of Dignitaries and introduction with Chief-de-Mission	10.15 AM
Welcome of the Dignitaries	10.30 AM
Flag hoisting by Chief Guest	10.35 AM
March Past and Chief Guest to receive the honour at the saluting base	10.40 AM
A round of track with torch and lighting of tournament flame	11.15 AM
Oath taking ceremony	11.20 AM
Overview of the Tournament by Organizing Secretary	11.25 AM
Welcome address by Director, DWR	11.35 AM
Inaugural address by Chief Guest	11.45 AM
Declaration of opening by the Chief Guest	11.55 AM
100 m race (Heat-1)	12.00 noon
Vote of thanks	12.15 PM
National Anthem	12.20 PM



2. Prize Distribution and Closing Ceremony

PROGRAMME

Venue: Sports Ground, ICAR-DWR, Jabalpur (M.P.)

Date : 11-12-2015

1. Assembly of participants
2. Team line-up in the centre of the sports field
3. Arrival of Chief Guest
4. Introduction of the Chief Guest with Chief-de-Missions and officials of the meet
5. Welcome of the Chief Guest
6. Prize Distribution
7. Presentation of report on games by the Organizing Secretary
8. Address of the Chairman, Organizing Committee
9. Address by the Chief Guest
10. Declaration of closing by the Chief Guest
11. Flag lowering and handing over to the next venue officials presentation
12. Vote of thanks
13. National Anthem



3. ICAR Sports and Games

The Sport scheme in ICAR started in 1979 on the occasion of ICAR's Golden Jubilee celebration. The first sport meet was organized by NAARM at Hyderabad. The ICAR sport was initiated at Zonal and Inter-Zonal Final level with the motto that all categories of staff, irrespective of their discipline, can participate in the ICAR sports event in the true spirit so as to facilitate the selected candidates as sportsmen. The basic purpose was to create enthusiasm, endurance and team building to be able to face challenging situations at any level in the country. Since then it is continuously being conducted in different institutes on rotational basis.

In order to categorize and systemize the process of sports in ICAR, different events are conducted at institute or head quarters. After winning at the institute level, the sportsmen participate at zonal level. After winning at zonal level, the inter zonal final tournament is conducted at one of the selected institutes.

At present, ICAR organizes the following team and athletic events :

MEN EVENTS	WOMEN EVENTS
<ol style="list-style-type: none"> 1. Athletics* 2. Football 3. Volleyball (shooting) 4. Volleyball (smashing) 5. Kabaddi 6. Badminton (single & double) 7. Table Tennis 8. Carrom Board (singles only) 9. Chess (singles only) 10. Basketball 	<ol style="list-style-type: none"> 1. Athletics** 2. Badminton (single & double) 3. Table Tennis (single & double) 4. Carrom Board (singles only) 5. Chess (singles only)

* Races: 100, 200, 400, 800, 1500 mtrs, relay (100x4); Jumps and throws: Long-jump, High-jump, Shot-put, Javelin throw, Discus-throw and cycle race 5000 mtrs.

**Races: 100, 200 mtrs, Javelin throw and Discus-throw.

As per guidelines, the Council provides all facilities to the selected candidates which helps in their physical build-up and boosts their moral. ICAR provides facilities like kits, sports equipments, boarding charges, lodging charges, to and fro traveling allowance and refreshment.

4. Organizing Committee and Other Committee

Organizing Committee		
1.	Dr. A.R. Sharma, Director	Chairman
2.	Dr. P.K. Singh, Pr. Scientist	Organizing Secretary
3.	Dr. Sushil Kumar, Pr. Scientist	Member
4.	Dr. Bhumesh Kumar, Sr. Scientist	Member
5.	Sh. M.P. Tiwari, Sr. Technical Officer	Member
6.	Sh. R.K. Giri, Administrative Officer	Member
Ground Development Committee (Pre-tournament)		
1.	Dr. Bhumesh Kumar, Sr. Scientist	Chairman
2.	Sh. R.S. Upadhyay, Chief Technical Officer	Member
3.	Sh. M.P. Tiwari, Sr. Technical Officer	Member
4.	Sh. S.K. Bose, Technical Officer	Member
5.	Sh. K.K. Tiwari, Technical Officer	Member
6.	Sh. G. Vishwakarma, Technical Officer	Member
7.	Sh. Bhagunte Prasad, T/Driver Tech. Asstt.	Member
Transport Committee		
1.	Dr. Bhumesh Kumar, Sr. Scientist	Chairman
2.	Sh. M.P. Tiwari, Sr. Technical Officer	Member
3.	Sh. G.R. Dongre, Sr. Technical Officer	Member
4.	Sh. G. Vishwakarma, Technical Officer	Member
5.	Sh. M.K. Meena, Technical Assistant	Member
Accommodation & Pandal Committee		
1.	Dr. Sushil Kumar, Pr. Scientist	Chairman
2.	Dr. P.P. Choudhary, Sr. Scientist	Member
3.	Sh. Vikas Chandra Tyagi, Scientist	Member
4.	Sh. Sandeep Dhagat, Asstt. Chief Tech. Officer	Member
5.	Sh. M.P. Tiwari, Sr. Technical Officer	Member

ICAR ZONAL SPORTS TOURNAMENT - 2015

6.	Sh. Basant Mishra, Technical Officer	Member
7.	Sh. J.N. Sen, Technical Officer	Member
Refreshment Committee		
1.	Dr. P.P. Choudhary, Sr. Scientist	Chairman
2.	Sh. Subhash Chander, Scientist	Member
3.	Sh. R.S. Upadhyay, Chief Technical Officer	Member
4.	Sh. R. Hadge, A.A.O.	Member
5.	Sh. M.S. Hedau, AF&AO	Member
6.	Sh. S.K. Parey, Sr. Technical Officer	Member
7.	Sh. K.K. Tiwari, Technical Officer	Member
Purchase Committee		
1.	Dr. P.K. Singh, Pr. Scientist	Chairman
2.	Dr. P.P. Choudhary, Sr. Scientist	Member
3.	Sh. M.P. Tiwari, Sr. Technical Officer	Member
4.	Sh. S.K. Parey, Sr. Technical Officer	Member
5.	Sh. R.K. Giri, Administrative Officer	Member
6.	Sh. M.S. Hedau, AF&AO	Member
7.	Sh. Pankaj Shukla, Sr. Technical Officer	Member
Jury Committee		
1.	Dr. P.K. Singh, Pr. Scientist	Chairman
2.	Dr. D.K. Pandey, Pr. Scientist	Member
3.	Dr. R.P. Dubey, Pr. Scientist	Member
4.	Dr. Sushilkumar, Pr. Scientist	Member
5.	CDMs of all 4 hosting Institutes (ICAR-DWR, IARI, CIAE and NBSS&LUP)	Member
Invitation, Media, Publicity & Photography Committee		
1.	Dr. R.P. Dubey, Pr. Scientist	Chairman
2.	Dr. P.J. Khankhane, Sr. Scientist	Member
2.	Sh. M.K. Bhatt, Sr. Technical Officer	Member
3.	Sh. Basant Mishra, Technical Officer	Member
4.	Sh. S.K. Tiwari, Technical Officer	Member
5.	Sh. O.N. Tiwari, Sr. Technical Officer	Member
6.	Sh. Pankaj Shukla, Sr. Technical Officer	Member

First Aid & Medical Attention Committee

1.	Dr. D.K. Pandey, Pr. Scientist	Chairman
2.	Dr. P.J. Khankhane, Sr. Scientist	Member
3.	Sh. Ajay Pal Singh, Sr. Technical Asstt.	Member
4.	Sh. B.P. Uriya, Asstt.	Member
5.	Ms. K.V. Sri Vidya, Asstt.	Member
6.	Sh. Jamna Prasad, SSS	Member

Stage Steering & Announcement Committee

1.	Dr. Shobha Sondhia, Sr. Scientist	Chairman
2.	Dr. Meenal Rathore, Sr. Scientist	Member
3.	Dr. Yogita Gharde, Scientist	Member
4.	Dr. C. Sarathambal, Scientist	Member
5.	Mrs. Nidhi Sharma, P.S.	Member
6.	Sh. Ajay Pal Singh, Technical Asstt.	Member

Publication & Record Keeping Committee

1.	Dr. Meenal Rathore, Sr. Scientist	Chairman
2.	Dr. Yogita Gharde, Scientist	Member
3.	Sh. Subhash Chander, Scientist	Member
4.	Sh. Sandeep Dhagat, Asstt. Chief Tech. Officer	Member
5.	Sh. M.K. Bhatt, Sr. Technical Officer	Member
6.	Sh. V.K.S. Meshram, Sr. Technical Officer	Member
9.	Sh. T. Lakhera, Asstt.	Member
8.	Sh. Manoj Gupta, P.A.	Member
9.	Ms. K.V. Sri Vidya, Asstt.	Member
10.	Sh. Francis Xavier, Sr. Clerk	Member

Event Co-ordinators		
1.	Football	Dr. P.P. Choudhary and Sh. K.K. Tiwari
2.	Volleyball Shooting	Sh. M.P. Tiwari and Sh. J.N. Sen
3.	Volleyball Smashing	Sh. M.S. Hedau and Sh. T. Lakhera
4.	Kabaddi	Sh. R.S. Upadhayay and Sh. B.P. Uriya
5.	Basketball	Sh. R. Hadge and Sh. Pankaj Shukla
6.	Badminton	Sh. Vikas Chandra Tyagi and Sh. O.N. Tiwari
7.	Table Tennis	Sh. Subhash Chander and Sh. M.K. Meena
8.	Chess & Carrom	Dr. P.J. Khankhane, Sh. S.K. Bose and Sh. Francis Xavier
9.	Cycle Race	Sh. Basant Mishra, Sh. Manoj Gupta and Sh. S.K. Tiwari
10.	Track event (Races, throws, jumps)	Dr. Sushil Kumar, Dr. Bhumesh Kumar and Sh. G.R. Dongre



Balancing Rock, Jabalpur

5. Prize Winners of ICAR ZONAL SPORTS TOURNAMENT (CENTRAL ZONE)-2014

Sports Meet was held at ICAR-National Bureau of Soil Survey and Land Use Planning, Nagpur from 16- 20 September, 2014

List of Prize Winners

Best Athlete (Women)	:	Ms. Puja Rai, DFR, Pune
Best Athlete (Men)	:	1. Ramesh Rai, IARI, New Delhi 2. Amit Rai, NBAIM, Mau
Best March Past	:	NBPGR, New Delhi
Overall Championship Trophy	:	IARI, New Delhi

WOMEN EVENTS

EVENTS	NAMES OF WINNERS AND RUNNERS		TIMINGS/ SCORES
Race -100 M	1 st	Ms. Puja Rai, DFR, Pune	19.06 sec.
	2 nd	Mrs. Asha Gaur, IARI, New Delhi	20.04 sec.
Race - 200 M	1 st	Ms. Neelam, IARI, New Delhi	47.01 sec.
	2 nd	Ms. Premlata Verma, CIAE, Bhopal	50.02 sec.
Javelin Throw	1 st	Ms. Sunita Chauhan, CICR, Nagpur	17.70 mtr.
	2 nd	Ms. Manju Lohani, CIAE, Bhopal	12.20 mtr.
Shot Put	1 st	Ms. Meenal Rathore, DWSR, Jabalpur	6.15 mtr.
	2 nd	Ms. Chandrakala, CIAE, Bhopal	5.40 mtr.
Discus Throw	1 st	Ms. Kalpana Singh, CICR, Nagpur	14.70 mtr.
	2 nd	Ms. Meenal Rathore, DWSR, Jabalpur	14.05 mtr.
High Jump	--- No participants --		
Long Jump	1 st	Ms. Puja Rai, DFR, Pune	2.94 mtr.
	2 nd	Ms. Premlata Verma, CIAE, Bhopal	2.60 mtr.
Carrom	1 st	Mrs. Sunanda Lade, NBSS&LUP, Nagpur	
	2 nd	Ms. U. Khemchandani, IARI, New Delhi	
Chess	1 st	Ms. Tara Dhabarde, CIAE, Bhopal	
	2 nd	Mrs. Sunanda Lade, NBSS&LUP, Nagpur	
Badminton (singles)	1 st	Ms. Jolly John, CIAE, Bhopal	
	2 nd	Ms. Asha Kudopa, CIAE, Bhopal	

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Badminton (doubles)	1 st	CIAE, Bhopal, 1. Ms. Jolly John, 2. Ms. Asha Kudopa
	2 nd	IARI, New Delhi 1. Ms. Asha Gaur, 2. Ms. Sree Devi
Table Tennis (singles)	1 st	Ms. Manju Lohani, CIAE, Bhopal
	2 nd	Ms. Premlata Verma, CIAE, Bhopal
Table Tennis (doubles)	1 st	CIAE, Bhopal, 1. Ms. Manju Lohani, 2. Ms. Asha Kudopa
	2 nd	IASRI, New Delhi, 1. Ms. Vijaya Laksh mi, 2. Ms. Anita Kohli

MEN EVENTS

Events	NAMES OF WINNERS AND RUNNERS		TIMINGS/ SCORES
Race 100 M	1 st	Sh. Vinod Kumar, IARI, New Delhi	13.00 sec.
	2 nd	Sh. Rohit Kumar, IARI, New Delhi	13.40 sec.
Race 200 M	1 st	Sh. Bhavesh Kumar, IARI, New Delhi	28.58 sec.
	2 nd	Sh. Ambalal Bhoi, NBSS&LUP, Nagpur	28.60 sec.
Race 400 M	1 st	Sh. Ramesh Rai, IARI, New Delhi	1min 04 Sec.
	2 nd	Sh. D.S. Negi, IARI, New Delhi	1 min 08sec
Race 800 M	1 st	Sh. Sada Sukh, IARI, New Delhi	2 min 32 Sec
	2 nd	Sh. Mukesh Kumar, IARI, New Delhi	2 min 42Sec
Race 1500 M	1 st	Sh. Ramesh Rai, IARI, New Delhi	5min 49 sec.
	2 nd	Sh. Viram Singh, IARI, New Delhi	5min 55 sec.
Relay Race (4x100) M	1 st	IARI, New Delhi	58.59 sec.
	2 nd	DSR, Mau	1min 04 sec.
Javelin Throw	1 st	Sh. Brij Mohan Pal, IARI, New Delhi	40.45 mtr.
	2 nd	Sh. Kanchan Sinha, IASRI, New Delhi	38.40 mtr.
Shot Put	1 st	Sh. Amit Rai, NBAIM, Mau	9.50 mtr.
	2 nd	Sh. Gurudas Shah, IARI, New Delhi	9.29 mtr.
Discus Throw	1 st	Sh. Amit Rai, NBAIM, Mau	26.07 mtr.
	2 nd	Sh. Raj Pal, IARI, New Delhi	23.15 mtr.
High Jump	1 st	Sh. Vikram Singh Sankhla, NBSS&LUP, Nagpur	1.35 mtr.
	2 nd	Sh. Abhishek Kumar Rai, DSR, Mau	1.30 mtr.

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Long Jump	1 st	Sh. Om Prakash, IARI, New Delhi	4.88 mtr.
	2 nd	Sh. Vikram Singh Sankhala, NBSS&LU P, Nagpur	4.80 mtr.
Cycle Race (5 Kms.)	1 st	Sh. Sanjeev Kumar, DSR, Indore	11min14.92sec
	2 nd	Sh. Deepak Kumar, IARI, New Delhi	11min17.54sec
Chess	1 st	Sh. M.M. Maurya, IASRI, New Delhi	
	2 nd	Sh. Sukanta Dash, IASRI, New Delhi	
Carrom	1 st	Sh. Veer Singh, DWSR, Jabalpur	
	2 nd	Sh. R.K. Hedau, CIAE, Bhopal	

TEAM EVENTS (MEN)

Event	Winner	Runner	Best Player
Badminton	IARI, New Delhi	NBSS&LUP, Nagpur	Sh. Ravindra Singh, CIAE, Bhopal
Table Tennis	IASRI, New Delhi	CIAE, Bhopal	
Kabaddi	IASRI, New Delhi	IARI, New Delhi	Sh. Janak Singh, IASRI, New Delhi
Volley Ball (shooting)	IARI, New Delhi	CIAE, Bhopal	Sh. Pratap Singh, IARI, New Delhi
Volley Ball (smashing)	CIAE, Bhopal	IARI, New Delhi	Sh. R.S. Yadav, CIAE, Bhopal
Basket Ball	IARI, New Delhi	IISS, Bhopal	Sh. Suresh Rana, IARI, New Delhi
Football	IARI, New Delhi	CIAE, Bhopal	Sh. Purshottam, IARI, New Delhi

(Dr. S.K. RAY)
Principal Scientist &
Secretary, Organizing Committee

(Dr. S.K. SINGH)
Director, NBSS&LUP, Nagpur &
Chairman, Organizing Committee

6. Participating Institutes and Players

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Sh. Utpal Ghosh	Sh. Tushar Athare	Sh. Sunil Gupta
Sh. Ashok Kumar Dubey		

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7. Jabalpur City, Madhya Pradesh

Madhya Pradesh perhaps occupies the oldest part of the subcontinent - called the Gondwana - the home of the Gonds. Close to Bhopal at Bhimbetka are the prehistoric caves that preserve some fascinating paintings dating back to paleolithic times. Experts have concluded that these are at least as old as the specimen at Pynnees. This was perhaps one of the earliest dwellings of human beings. In fact, the excavations here have revealed a cultural sequence right from the late Stone Age to the early historical period.

Madhya Pradesh is the richest state in the country in respect of painted rock-shelters, the majority of which have been found in the districts of Sehore, Bhopal, Raisen, Hoshangabad and Sagar. During the ascendancy of the Guptas, the whole region came under the domain of the imperial Guptas and subsequently formed a part of Harshavardhan's empire. With the decline in imperial power, the province was broken up into small principalities contending forever to establish their supremacy over one another.

Chandelas were one such dynasty claiming descent from the moon, who carved out a strong prosperous kingdom for themselves after the decline of the great empire. There was a short spell of inspired construction activity under the Chandela in the 10th to 11th centuries. They are the ones who have left behind the cluster of matchless temples at Khajuraho, now a World Heritage Site. Chandelas were followed by Pratihara and Gaharwar Rajput dynasties claiming mythical origins relating their scions to the gods or heroes in the epics. They lived and died by a difficult code of chivalry, wasted away scarce resources in an expensive feudal life style and could not ultimately keep at bay the expanding Muslim Power. Rulers of Malwa fought a running battle with the subedars of Gujarat or the commanders of the Sultan of Delhi throughout the sultanate period.

Bir Singh Deo of Orchha was for instance installed on his throne by Jehangir who felt obliged to the Bundela hieftain for having removed a painful thorn Abdul Fazal, from his side. Abdul Fazal one of the nine Jewels of Akbar's court was murdered at his behest near Gwalior.

This was the Raj period when the Central Provinces were left for the large part outside developments in British India. The Maharajas were free to indulge in their expensive whims much to the chagrin of their poor populace. This is the world evoked by Kipling in his Jungle Book and chronicled by F.M. Forster in the Hill of Devi. Jhabua, Nagod, Alirajpur, Sarguja Dewas Senior and Junior were quaint names of exotic places where eccentric Englishmen could strive to carve out a career or amass a fortune or simply drop dead.

Jabalpur (Seat of the Kalchuris)

Pleasure resort and capital of the Gond Kings during the 12th century, Jabalpur was later the seat of the Kalchuri dynasty. The original settlement in this area was ancient

Tripuri and the rulers of this city, the Hayahaya, are mentioned in the Mahabharata. It passed successively into Mauryan and then Gupta control until, in 875 AD, it was taken by the Kalchuri rulers. In the 13th century it was overrun by the Gonds and by the early 16th century it had become the powerful state of Gondwana. Though besieged by Mughal armies from time to time, Gondwana survived until 1789 when it was conquered by the Marathas. Their rule was unpopular, due largely to the increased activities of the thuggees who were ritual murderers and bandits. The Marathas were defeated in 1817 and the thuggees subdued by the British who developed the town in the mid 19th century.

The city of Jabalpur was the capital of the erstwhile medieval Gond rulers. It is not only an important historical place, but it is also famous for the Marble Rocks gorge on Narmada River. Narmada River valley having world famous Marble Rocks the only of its kind in the world where the whole river flows for nearly 2 Kms. in between varied coloured and tinted marble rocks with a deep water fall. Its cardinal point are 23 degree 10'N latitude and 79 degree 57' E longitude with altitude of 393 meters mean sea level.

Dhuandhar Falls

The Narmada, making its way through the Marble Rocks narrows down and then plunges in a waterfall known as Dhuandhar or the smoke cascade. The falls and the breaking of the volume of water at the crest present an awesome spectacle of Nature's power unleashed. Boating facilities at Veda Ghat are available between November-May. Boating on a moonlit night, when the whole stretch of water is transformed into a sheet of liquid silver is absolutely magical. In the narrow channel of the mighty river, there is a place approached so closely from the opposite banks that the local people have aptly named it the "Monkey's Leap".



Bhedaghat

Soaring in glittering splendour, the Marble Rocks at Bhedaghat rise to a hundred feet on either side of the armada. The serene loveliness of the scene is one of cool quiet, the sunlight sparkling on the marble-white pinnacles and casting dappled shadows on the pellucid waters. These white rocks with views of black and dark green volcanic seams are truly majestic, and produce a magical effect on moonlit nights. The holy river flows by tranquilly flanked by the towering cliffs which reflect in it like a mirror the changing moods of nature. A little distance away, it becomes turbulent as it plunges in a mighty water fall known as Dhuandhar.



Madan Mahal Fort

Built by the Gond ruler, Raja Madan Shah in 1116 atop a rocky hill, the fort dominates the skyline and provides a panoramic view of the town and the countryside around it. These medieval constructions were built by the famous Gond King, Sangram Shah, during 1480-1540.



Rani Durgavati Memorial and Museum

The Rani Durgavati Museum is dedicated to the memory of the great Queen Durgavati as her memorial and museum. A collection of sculptures, inscriptions and prehistoric relics are on display - many from the 10th and 11th C. A sandstone idol of Durga and the sculpture of Saraswati is also on display in the museum. The museum was established in 1976 and also houses sculptures, coins, inscriptions, copper plates and many other archaeological objects.

Chausat Yogini Temple

Situated atop a hillock and approached by a long flight of steps, the Chausat Yogini Temple commands a singularly beautiful view of the Narmada flowing through the jagged Marble Rocks. Dedicated to goddess Durga, this 10th century temple has exquisitely carved stone figures of deities belonging to the Kalchuri period. According to a local legend, this ancient temple is connected to the Gond Queen Durgavati's palace through an underground passage.



Tilwara Ghat

From where Mahatma Gandhi's ashes were immersed in the Narmada, and venue of the open session of the Tripuri Congress in 1939. The 12th century Mala Devi Mandir, Pisan Hari Jain Temples and Roopnath are some of the other sites in and around Jabalpur which merit a visit.

Bargi Dam Water Sports

The Bargi dam is located around 35 Km from the Jabalpur on the Nagpur road. This hydro Power dam is circulating electricity to Jabalpur and Seoni district. There is a water sports center started by Madhya Pradesh Tourism for the Boat and Cruise ride in Dam reservoir. You can also board the cruise for the journey up to Mandla district which nearest to Kanha National Park.



Gwari Ghat

Gwarighat is a famous Ghat of holy river Narmada. This Ghat is located nearest to the city centre. Large of people used to visit this Ghat as the water level remains low (except in Monsoon), so the people can easily take the holy dip of river Narmada. There is an art gallery of oil Paintings depicting Sikh religion as savior of Hindutva, at gurudwara associated with Guru Nanak Dev Ji. The Gurudwara is opposite to the Ghat of Narmada River.

Kachnar City

It is a nickname for Vijayanagar a new posh locality in Jabalpur and is famous for about 70 feet high Lord Shiva statue which houses a cavern with replicas of Shivalingam from important holy shrines of Lord Shiva all over country.



Tewar

About 12 Km from the Jabalpur city lies a small village called Tewar. It is located on the Jabalpur Bhopal road. There is a famous temple of Goddess Tripur Sundari which is visited by most number of visitors going to Bhedaghat. In the recent times the Archeological survey of India has discovered the utensil buried deep inside which were believed to be of 1000 of years old.



Tourist Attractions Near Jabalpur

Ghughwa Fossil Park of Mandla

Ghughua or Mandla Fossil Park is about 105 km. from Jabalpur city. It is known for plant fossils that were collected from near-by areas and displayed here for general visitors. Most of the fossils are about 6.5 million years old. These fossils are of trees like mango, palm, amla, banana etc. Here some fossils are of those trees which are commonly found in sea shores or in aquatic environment. Fossils are of time when Pangaea super continent was existing. It is spread over an area of 1058 hectare of land.

Mandla and Ramnagar

95 km south of Jabalpur, Mandla is known for its fort which is situated in a loop of the Narmada river so that the river protects it from three sides and with a ditch on the fourth. Built in the late 17th century, the fort is now subsiding into the jungle, although some of the towers still stand. About 15 km away is Ramnagar with a ruined three-storey palace overlooking the Narmada. The palace and then the fort were both built by Gond kings, retreating South before the advance of Mughal power.

Amarkantak (Narmada Queen)

Amarkantak is located in the state of Madhya Pradesh which is located in the hills of the Maikal Mountain Range. The place is well-known for its religious background and for the holy atmosphere which is laden with various mythical stories. The place is located at the point where Vindhya and Satpura meet. It is regarded as one of the sacred places and the river Narmada as one of the blessed rivers. It is said in the Mythologies that the daughter of Lord Shiva, Narmada flows through this region thereby making it sacred and auspicious. There is a temple here called Narmada Udgam at the source of the river Narmada, situated just south of the main road. There are also several temple ruins and the Kapildhara and Dugdhdhara waterfalls about 12km away are worth a visit.

Pachmarhi

Pachmarhi is a hill station also known for the Pachmarhi Cantonment. It is widely known as "Satpura ki Rani" (Queen of Satpura), situated at a height of 1000 m in a valley of the Satpura Range in Hoshangabad district. The highest point in Central India and the Vindhya and Satpura range; Dhupgarh at 1100m is located here. It is 150 km from Jabalpur by Rail upto Piparia and then by Bus 50 Km.

Kanha

The picturesque Kanha National Park was the inspiration behind Rudyard Kipling's unforgettable classic "Jungle Book". The park was created in 1955 by a special law and since then it has dedicated itself in preserving a variety of animal species. Many endangered species have indeed been saved here. Today Kanha is among the few most scenic and beautiful wildlife reserves in Asia. This 'Tiger Country' is the ideal home for both predator and prey. Located in the Mandla district of Madhya Pradesh, Kanha national park cum Tiger reserve extends over an area of over 1,940-sq-kms. The major feature of this region's interesting topography is the horseshoe shape valley. The main wildlife attractions in the park are tiger, bison, gaur, sambhar, chital, more pictures.... barasingha, barking deer, black deer, black buck, chousingha, nilgai, mouse deer, sloth bear, jackal fox, porcupine, hyena, jungle cat, python, pea fowl, hare, monkey, mongoose, tiger, and leopard. Many bird species are also found here.

Bandhavgarh

Bandhavgarh National Park is one of the wild life sanctuaries in Madhya Pradesh. The National park is situated 197 km away north-east of Jabalpur. This wild life park derived its very name from an ancient fort in the area. Bandhawgarh National Park belongs to the Vindhyan mountain ranges of central India and it boasts to have the highest density of tiger population in the country. Now there are about 46 to 52 tigers one can spot here.

Once a hunting reserve of the royal family of Rewa in more recent times, Bandhavgarh was declared a park in 1968. This is also the site where the famous White Tigers of Rewa were discovered. Wandering through the Bandhavgarh national park on an Elephant Back, the chances of seeing a tiger are quite good.

8. ICAR - Directorate of Weed Research - Profile

Weed control is as old as agriculture itself. But the earliest record of weed control in India through chemicals dates back to 1937 when sodium arsenite was used to control *Carthamus oxycantha* in Punjab. Later, the first herbicide used was 2,4-D with the development of its commercial formulation in 1940s. Research work on weed management is going on in our country for the past six decades since the initiation of a coordinated scheme in principal crops like rice, wheat and sugarcane in 1952 in 11 states, viz. Andhra Pradesh, Assam, Tamil Nadu, Madhya Pradesh, Maharashtra, Kerala, Punjab, West Bengal, Rajasthan, Uttar Pradesh and Jammu & Kashmir. In order to bring the researchers in weed science on a common platform, the Indian Society of Weed Science (ISWS) was established at Hisar in 1968.

It was 1978 when weed research programme got a boost with the launching of All India Coordinated Research Project on Weed Control by the ICAR in collaboration with the USDA. Initially, six centres were started at different SAUs for a period of six years. Later more centres were added during different phases, and presently there are 22 centres located in different agricultural Universities. This project has assisted the farming community through the scientific technologies, which are effectively utilized for alleviating the yield losses due to weeds in field crops. In VII Plan, it was decided to establish a National centre for basic as well as applied research in weed science. A team comprising Dr. V.M. Bhan, Dr. S.K. Mukhopadhyay, Dr. S. Sankaran and Dr. V.N. Saraswat visited different states in the country and finalized the site at Jabalpur. Accordingly, the National Research Centre for Weed Science (NRCWS) was approved during the middle of VII Five Year Plan with a total outlay of Rs. 64 lakhs. Functioning of this Centre started with the joining of Dr. V.M. Bhan as its founder Director on 22 April, 1989. The office of NRCWS was initially established in a single room at the Department of Agronomy, College of Agriculture, JNKVV, Jabalpur. On 1 January, 1990, 61.5 ha farm land at Khairi village was acquired from JNKVV, and the Centre started functioning from rented premises at Adhartal. The first scientist joined in November 1990, and the research work started in 1991-92 with the joining of scientists in different disciplines. The NRCWS was upgraded as Directorate of Weed Science Research (DWSR) in 2009, and further renamed as Directorate of Weed Research (DWR) in 2014.

In the initial years of establishment, when major emphasis was on planning and development of basic infrastructure, the growing years between 1995-2005 were witness to strengthening of research activities, initiating collaborations with other ICAR institutes, funding agencies and pesticide industry. The administrative-cum-laboratory building was inaugurated on 9 April, 2001 by the Union Agriculture Minister, Shri Nitish Kumar in the presence of Dr. R.S. Paroda, Director General, ICAR. In the later years, premises of the centre attained a new look with organization of farm and other several facilities like FACE, LC-MS/MS, aquatic chambers, lysimeters, facility for residue-runoff studies, bioremediation unit, containment chambers etc. A major programme on "National Invasive Weed Surveillance" was launched in 10 states covering 267 districts for exhaustive

surveillance of quarantine weeds which might have entered the country with the import of wheat in 2006. Many events like the Interface meeting, National consultation on weed utilization, and biological control of weeds were also organised. Since 2010, four scientists were trained abroad under NAIP programme. The ICAR Zonal Sports Tournament (Central Zone) was successfully organized in 2011. On completing 25 years, the Directorate celebrated the year 2013-14 as the “Silver Jubilee Year”. Several programmes and lectures by eminent scientists were organized at the Directorate.



Facilities

The Directorate is one of the best equipped institutes of the ICAR in terms of field and laboratory facilities. All the required facilities for high quality basic, applied and strategic research are available. Some of the special features are: (i) Small and beautiful campus, (ii) Excellent infrastructure, offices and laboratories, (iii) Model research farm, fully levelled, irrigated. (iv) Laboratories well furnished, equipped with all basic and some advanced equipments, (v) 24 x 7 electricity, (vi) 24 x 7 internet connectivity, (vii) All staff having computers, (viii) No constraint of labour, farm machinery and others, (ix) No dearth of funds and (x) Diversified crop resources – upland, lowland, ponds, aquatic, horticultural crops.

Research farm

The research farm is equipped with modern farm machines like high power tractors, mini tractor, power weeders, tractor-driven sprayers, laser land-leveller, happy seeder, zero-till seed-cum-fertilizer drill, multi-crop seed-cum-fertilizer drill, disc bund former, dozer blade, front loader, bed maker, multi-crop threshers, reaper, tube wells, underground irrigation pipelines and sprinkler system. The 'Model' farm has the following features:

- Well laid out laser-levelled fully-irrigated experimental farm (60 ha)
- Containment facility for conducting experiments under varied environmental conditions
- Open Top Chambers (OTCs) to assess the impact of climate change on crops and weeds
- Free Air CO₂ Enrichment (FACE) facility to study the effect of elevated CO₂ on crop-weed interaction
- Lysimeters to assess ground water contamination potential of herbicides
- Phytoremediation unit to study the bioremediation potential of weed species
- Setup to evaluate management practices for aquatic weeds
- Runoff tanks for studying on herbicides toxicity to non-target organisms

- Well equipped research laboratories
- Agro-waste and weed biomass composting unit
- Weed cafeteria for demonstration and conservation of weed germplasm
- Weed seed display containing germplasm of more than 100 species
- Technology park on weed management technologies
- Information centre displaying the world of weed science
- Net/poly-houses/containment chambers for quarantine weeds and multiplication of bio-agents

Laboratories

All the laboratories covering different disciplines, viz. agronomy, plant physiology, soil science, residue chemistry, biocontrol, biotechnology and environmental science are well equipped with most modern equipments, such as the following: (i) LC-MS/MS system, (ii) Vacuum evaporator, (iii) High performance liquid chromatography (HPLC), (iv) Lyophilizer, (v) Gas chromatography (GC) unit, (vi) UV-visible double beam spectrophotometer, (vii) Portable photosynthesis system (IRGA), (viii) Kjel-Tec unit for nitrogen analysis, (ix) Stereo zoom research microscope with photographic attachment, (x) Leaf area meter, (xi) Osmometer, (xi) Thermal cycler (PCR), (xii) Multi-probe soil moisture meter, (xiii) Gel documentation unit, (xiv) Root scanner, (xv) Atomic absorption spectrometer (AAS), (xvi) Ultra water purification unit, (xvii) Soil CO₂ flux analyser, (xviii) High speed centrifuge, (xix) Spectro-radiometer, and (xx) SPAD chlorophyll meter.

Other infrastructure

Agriculture Knowledge Management Unit (AKMU) is well equipped with computers, LAN facilities and A-0 plotter. Specialized software like ArcInfo for GIS analysis and ERDAS Imagine for satellite image analysis are available along with SAS and other statistical softwares. All the scientists are provided with internet connection through Lease Line. The main building of the Directorate is Wi-Fi enabled.

Library has a total collection of 3057 books pertaining to weed science. It has modern facilities such as CAB-PEST and CAB-SAC CD-ROMs and Current Contents on Diskette (CCOD) on biological sciences, software for library automation and information retrieval. It has 60 Indian and 20 foreign journals in its subscription. Library is also a member of Consortium for e-Resources in Agriculture (CeRA). All the scientists have online access to more than 2000 e-journals in various fields of science. Reprographic and documentation facilities have also been created for the preparation of documents and reports.

Well developed Information Centre has been created with the aim of briefly informing farmers, dignitaries and other stakeholders about its mandate and thrust areas; history, importance, methodologies and tools of weed management; problematic and alien invasive weeds; weed utilization and environmental concerns in respect to chemical weed management using sophisticated display systems. Directorate's publications, prototypes

of weed management tools and live specimen of weed seeds are also displayed.

Current research projects (2012–17)

At present, the following research projects are being undertaken at the Directorate for the period 2012–17:

1. Development of sustainable weed management practices in diversified cropping systems
 - 1.1. Weed management under long term conservation agriculture systems
 - 1.2. System-based approach to weed management
 - 1.3. Improving input use efficiency through efficient weed management
 - 1.4. Standardization of spraying techniques and mechanical tools for weed management
2. Weed dynamics and management under the regime of climate change and herbicide resistance
 - 2.1. Effect of climate change on crop-weed interactions, herbicide efficacy and bioagents
 - 2.2. Physiological and molecular basis of herbicide resistance development in weeds and evaluation of herbicide-tolerant crops
 - 2.3. Development of weed seed identification tools and weed risk analysis
3. Biology and management of problematic weeds in cropped and non-cropped areas
 - 3.1. Biology and management of problematic weeds in cropped areas
 - 3.2. Biology and management of problematic weeds in non-cropped areas
 - 3.3. Biology and management of aquatic weeds
4. Monitoring, degradation and mitigation of herbicide residues and other pollutants in the environment
 - 4.1. Impact of herbicides in soil, water and non targeted organisms and herbicide mitigation measures
 - 4.2. Degradation of herbicides in the environment
 - 4.3. Bio-remediation of pollutants using terrestrial / aquatic weeds
5. On-farm research and demonstration of weed management technologies and impact assessment
 - 5.1. On-farm research and demonstration of weed management technologies for higher productivity and income
 - 5.2. Impact assessment of weed management technologies on social upliftment and livelihood security

Emerging challenges and concerns

Weed problems are dynamic in nature and are likely to be more serious in the coming decades due to the following factors: (i) Adoption of dwarf HYVs and hybrids, (ii)

High-input agriculture, (iii) Altered agronomy – zero-till, organic farming, (iv) Monocropping / fixed cropping systems – shift in weed flora, (v) Development of herbicide resistance in weeds, (vi) Herbicide residue hazards, (vii) Growing infestation of weedy rice, parasitic and other obnoxious weeds, (viii) Globalization and invasion of alien weeds, (ix) Implications of climate change, and (x) Lack of quality human resource in weed science. Stakeholders express serious concerns about weed management in real field situations. In fact the weed related problems have become the issues of common discussion in the meetings, seminars, trainings, workshops, Kisan Mela and Sangosthis. Following issues are raised by the stakeholders: (i) Non-availability of labour for weed control, (ii) Rising costs of manual weeding, (iii) Invasion of new weed species, (iv) Application techniques of herbicides, (v) Herbicide + other pesticide combinations, (vi) Non-availability of herbicides and mechanical tools, (vii) Spurious chemicals, costly herbicides, (viii) Large packings of herbicides, (ix) Registration of new molecules, (x) Lack of awareness / extension efforts and (xi) Weeds in no-man's lands.

Continuous refinement of weed management technologies is essential to cut down production costs, and also in the light of ever-changing socio-economic conditions of the farmers and international trade policies. Rapid expansion of weedy rice infestation, evolution of herbicide resistant weeds, introduction of alien invasive weeds, lack of low-cost environment-friendly weed management technologies for water bodies and for dryland farming systems are some of the burning issues requiring immediate attention. Herbicides are going to become increasingly popular in the coming years but the residue hazards and other environmental issues are also required to be suitably addressed. Development of suitable technologies to tackle the probable scenario that may emerge in the area of crop-weed competition due to increased atmospheric CO₂ concentration and subsequent global warming are some of the major future challenges. Herbicide tolerant GM crops may be a possibility in the coming decades after the legitimate concerns are adequately addressed.

Way forward

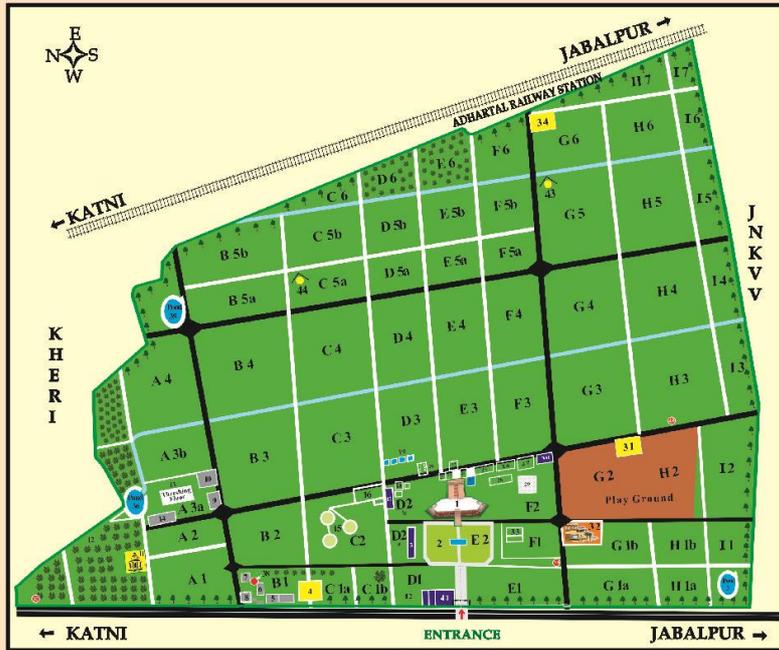
A great deal of change has occurred in weed management for the last few decades. In fact, serious research in weed science was undertaken in our country during 1970s when some herbicides like 2,4-D, butachlor, isoproturon, atrazine and few others were found highly effective in major cereal crops. Some weeds in croplands and non-crop lands started becoming predominant in the 1990s, for which, effective control measures were developed. Studies on herbicide use in other crops like pulses and oilseeds were started with the availability of new herbicide molecules. Thereafter, issues related to herbicide residues and resistance development in weeds cropped-up and systems approach to weed management was emphasized. Aquatic weeds also gained attention due to their vast invasion in the water bodies. In the present times, low-dose high-potency herbicide molecules and mixtures have become available for major crops like rice, wheat and soybean. It is also feared that climate change will shift the behaviour of crop-weed competition. However,

newer opportunities will also be available in the coming decades for tackling weed menace with the adoption of conservation agriculture, organic farming and precision farming systems.

A holistic approach with multi-disciplinary, multi-locational and multi-institutional involvement would be imperative to tackle future weed problems. More emphasis will be given on developing integrated weed management technologies involving non-chemical methods, use of cover crops, weed suppressing crop cultivars; mechanical weeding tools, etc. Basic research in areas like allelopathy and bioherbicides which have relevance for practical weed management will be undertaken through collaborative arrangements with other institutes. Research on biological control of important alien invasive weeds in non-cropped situations, aquatic bodies, etc. will be undertaken with the participation of all stakeholders. Scientists will also be encouraged to undertake on-farm research trials in participatory mode and take part in technology development, refinement and transfer. Technologies developed will be refined and fine-tuned for their suitability in actual farmers' situations through on-farm trials, awareness campaigns, farmers' fair, farmers' training, etc. The involvement and partnership of other line departments such as state departments of agriculture, NGOs, local administration, etc. will be ensured to achieve the goals. The sound technical programme for network research on management of aquatic and parasitic weeds, weed management in rainfed agriculture, horticultural and vegetable crops will be required after thorough interaction with collaborating organizations.

AICRP on Weed Management network functioning under the Directorate is a great strength and will continue to be immensely useful in this regard. There are AICRP-WM centres, each with a team of multidisciplinary scientists, situated in different SAUs under different agro-ecological regions. Efforts will be made to develop effective linkages with other sister institutions under ICAR as well as other scientific organizations like CSIR, DBT, DST, ISRO, etc. in formulating innovative research projects. Efforts are also needed to be made with IITs and IIITs to explore the possibility of utilizing the robotic and LASER technology for weed control. Linkages in research and technology development with SAUs and related ICAR/ other institutions will be strengthened not only to avoid duplication of work but also for effective utilization of resources and complementing research outputs. Scientists will be trained in new areas like weed risk analysis, precision farming, herbicide residue estimation, C-sequestration, crop-weed modeling, climate change, biotechnology, etc. Evaluation of new low-dose high-potency herbicide molecules and their methods of application for higher efficiency and other related issues will be addressed in collaboration with the herbicide industry.

निदेशालय परिसर मानचित्र DWR CAMPUS MAP



प्रशासनिक भवन	1	Administrative Building
फव्वारा एवं उद्यान	2	Fountain & Lawn
कार पार्किंग	3	Car Parking
प्रयोग भण्डार - 1	4	Farm Store-1
खरपतारा	5	Workshop
ट्रेक्टर शेड	6	Tractor Shed
प्रयोग अनुभाग	7	Farm Section
नमोरलन खवन	8	Recreation Club
प्रयोग भण्डार - 2	9	Farm Store-2
वर्मीकम्पोस्ट इकाई	10	Vermicompost Unit
बागदाना बाबा मंदिर	11	Bagdana Baba Temple
बागान	12	Orchard
खलिहान	13	Threshing Floor
उपकरण शेड	14	Implement Shed
फेस सुविधा	15	FACE Facility
कंटेनमेंट सुविधा	16	Containment Facility
फील्ड प्रयोगशालाएँ	17	Field Laboratories
इनसेक्टरी	18	Insectory
मत्स्य संवर्धन कुण्ड	19	Fish Culture Pond
लाईसीमीटर	20	Lysimeter
रिपोग्राफिक यूनिट	21	Reprographic Unit
ओ.टी.सी. यूनिट	22	OTC Unit
कार्बन डाय ऑक्साइड चेंबर	23	CO ₂ Chamber

केंद्रीय भण्डार	24	Central Store
पॉली हाउस	25	Poly House
नेट हाउस - 1	26	Net House-1
कृषीय प्लेटफॉर्म	27	Aquatic Platform
नेट हाउस - 2	28	Net House-2
खरपतवार कोफेटरिया	29	Weed Cafeteria
विद्युत उपकेंद्र	30	Electric Substation
खेळंगण	31	Play Ground
निदेशक आवास	32	Director's Residence
कृषीय खरपतवार टैंक	33	Aquatic Weed Tank
फायटोरेमिडिएशन इकाई	34	Phytoremediation Unit
तालाब - 1	35	Pond-1
तालाब - 2	36	Pond-2
ट्यूब वेल नं. 3	37	Tube Well No. 3
ट्यूब वेल नं. 2	38	Tube Well No. 2
ट्यूब वेल नं. 1	39	Tube Well No. 1
ट्यूब वेल नं. 4	40	Tube Well No. 4
सुरक्षा चौकी	41	Security Office
शुद्ध फेड एवं एस वी आई एटीएम	42	Sale Counter & SBI ATM
परवेक्षण टॉवर - 1	43	Watch Tower-1
परवेक्षण टॉवर - 2	44	Watch Tower-2
दुपटिया स्टैंड	45	Two Wheeler Stand
तालाब - 3	46	Pond-3

भाकूअनुप - खरपतवार अनुसंधान निदेशालय, जबलपुर
ICAR - Directorate of Weed Research, Jabalpur