# सोयाबीन समाचार
# SOYBEAN NEWS

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## भा.कृ.अनु.प-भारतीय सोयाबीन अनुसंधान संस्थान
## I.C.A.R. - INDIAN INSTITUTE OF SOYBEAN RESEARCH

### निदेशक की कलम से

सोयाबीन भारत की सर्वश्रेष्ठ तिलहनी फसल है । इसमें 40% प्रोटीन और 20% तेल होता है तथा यह अच्छी गुणवत्ता वाली प्रोटीन का सबसे किफायती स्त्रोत है । इसमें खनिज और उपयोगी न्यूटास्यूट्रिकल जैसे आइसोफ्लेवोंस, टोकोफेरोल भी होते हैं, जो स्वास्थ्य हेतु अत्यधिक लाभदायक है । इस फसल में देश कुपोषण सुरक्षा प्रदान करने तथा बड़े पैमाने पर हो रहे प्रोटीन कुपोषणता को समाप्त करने की क्षमता है। वैज्ञानिकों के लिए ये बड़ी चुनौती है की बदलते जलवायु परिदृश्य में और सोयाबीन का खाद्य-तेल, पशु आहार एवं स्वास्थ्य भोजन के रूप में बढ़ी हुई मांग को देखते हुए नई उत्पादन तकनीकी/प्रौद्योगिकी को तैयार करें ताकि इस मांग को पूरा कर सके ।

मुझे भा.कृ.अनु.प. - भारतीय सोयाबीन अनुसंधान संस्थान, इन्दौर के "सोयाबीन समाचार" का वर्तमान अंक प्रस्तुत करते हुए अत्यंत हर्ष हो रहा है । यह अंक 2019 की अवधि के दौरान समस्त समाचार, घटनाओं एवं प्रमुख अनुसंधान उपलब्धियों की झलक प्रस्तुत करेगा । सबसे महत्पूर्ण उपलब्धियों में विभिन्न प्रकार के महत्वपूर्ण कृषि कारकों के अनुकूल आनुवांशिक रूपों को विकसित करना रहा है, जिसमें जैसे शीघ्र परिपवक्ता, पीला मोजाईक प्रतिरोध, उच्च ओलिक अम्ल और लिपोक्सिलेजेज मुक्त जीनोटाइप के साथ नए सोयाबीन जीनोटाइप का विकास शामिल है। नए जर्मप्लाज्म को प्रजनन कार्यक्रम में उपयोग करने के लिए यू.एस.डी.ए (कोर संग्रह) तथा विश्व सब्जी केन्द्र, ताइवान से (वेजिटेबल टाईप) भारत में आयात किया गया है। अधिक तापमान प्रतिरोधी, सुखारोधी, लवण सहनशीलता, संस्थान ने कई विशेष कार्यक्रमों जैसे मेरा गाँव और मेरा गौरव, स्वच्छ भारत अभियान का आयोजन किया तथा सोयाबीन उत्पादन की वृद्धि करने के लिए वर्तमान प्रोद्यौगिकियों से सम्बंधित जानकारी प्रदान कर कई किसान भाईयों को प्रशिक्षित किया है। साथ ही साथ संस्थान ने कई महिला किसान को भी विभिन्न प्रकार के सोया - आहार तथा इसके लाभ के विषय में जानकारी प्रदान की गई । सोयाबीन समाचार की संपदकीय टीम सहभागिता तथा प्रतिबद्धता विशेष रूप से प्रशंसनीय है ।

### *From Director's Desk*

Greetings from ICAR-IISR!

Soybean is number one oilseed crop in India. Its grain contains 40 % protein and 20 % oil. The crop has a potential to provide nutritional security and to eradicate rampant protein malnutrition in the country. It is one of the most economical sources of good quality protein, minerals and useful nutraceuticals like isoflavones and tocopherols, which provide immense health benefits. Under changing climate scenario, the biggest challenge for soyabean scientists is to develop climate resilient technologies for meeting the manifold increase in demand for edible oil and animal feed and for direct consumption of soybean as a food. I have great pleasure in presenting the current issue of "Soybean News" from ICAR-Indian Institute of Soybean Research (ICAR-IISR), Indore. It will provide glimpses of news and events, and salient research achievements for the period July to December, 2019. The most significant achievements include identification of new soybean genotypes with various agronomically and nutritionally important traits such as high yield, early maturity, photo-insensitivity, tolerance to high temperature, drought and salinity, insect resistance, YMV resistance, high oleic acid and other food grade characteristics. All these genotypes are being evaluated under AIRCP trials. An association mapping panel (N=300) was screened for drought, heat and water logging tolerance and potential donors for these stresses have been identified. Genetics of anthracnose resistance revealed complementary gene action in three donors. Forty-three isolates of *Macrophomina phaseolina* have been sequenced and sequences are submitted and published through NCBI gene bank. ICAR-IISR organized outreach programs like Mera Gaon Mera Gaurav, and Swacchh Bharat Mission, and trained number of farmers regarding the recent technologies to enhance the soybean production in the country. Number of women farmers were trained regarding preparation of various soya-foods and made them aware of their health benefits in diet. ICAR-IISR scientists frequently visited the farmers fields affected by various diseases and insect pest and recommended appropriate management practices to tackle the biotic and abiotic stresses. The editorial team of Soybean News deserves special appreciation for their involvement and commitment.

**V.S. Bhatia** (Director)

## Salient Research Achievements

Several improved genotypes of soybean have been developed and are being evaluated under AICRPS trial for following traits.

| Targeted Traits | Entries |
|---|---|
| Food Grade Characteristics | NRC 132, NRC142, NRC 150, NRC 151, NRC 152 and NRC 153 |
| High Oil Content | NRC 148, and NRC 149 |
| Early Maturing | NRC 151, NRC 152 NRC 155, NRC 156 NRC 158 and NRC 159 |
| Mungbean Yellow Mosic Indian Virus (MYMIV) Resistance | NRCL 1 and NRCL 2 |
| Photo-Insensitivity | NRC 130 and NRC 131 |
| Drought tolerant | NRC 136 and NRC 137 |
| Hight Yield, Water logging tolerance, MYMIV Resistance and Moderately Resitance to charcoal rot disease | NRC 128 |

- Phenotyping of GWAS panel (N=300) for drought, heat and water logging tolerance revealed TGX 849-143 D, JSM 288, EC 291400 and VLS 75 as drought tolerant based on drought resistance index (DRI) on grain yield and genotypes, EC 456556, EC 95815, JSM 288 and JS 75-46 as water logging tolerant based on percent yield reduction. Accessions viz., EC 456556, EC 39177, EC 251388, EC 396065 and TGX 317-37 E found heat tolerant based on percent reduction in yield.
- Genetics of anthracnose disease resistance in three $F_2$ crosses viz., EC 34372 x JS 95-60, EC 457254 x JS 95-60 and AKSS 67 x JS 95-60 revealed that the resistance in each of the three resistant sources viz., EC 34372, EC 457254 and AKSS 67 was governed by two major genes interacting in complementary mode. Under field condition, soybean Genotypes i.e., EC 389160, EC 41318, EC 993294, DS 3105, DS 3106, RS 10-46, JS 20-69 and IC 391443 were found to be highly resistant against anthracnose disease.
- Based on biochemical analysis of soybean endophytes *Aspergillus flavus, Fusarium falciforme, Macrophomina phaseolina* and strains of *Fusarium* spp were found to produce certain enzymes such as chitinase, cellulose, amylase and protease which are suitable candidates for management of these major soybean pathogens.
- Molecular characterization of 43 isolates of *Macrophomina phaseolina* has been done using ITS 1 and ITS 4. Aligned sequence of ITS 1 and ITS 4 were submitted and published through NCBI gene bank.
- Direct sowing of soybean in *kharif* and wheat and maize crops in *rabi* with broad bed furrow machine in permanent broad bed furrow system without tillage resulted in increased crop productivity in the changing weather scenario along with stability in production. In the permanent broad bed furrow system, 50% of the soybean crop residue was left in the field during the subsequent rabi season followed by 50% of the gram, 30% of the wheat and maize crop residue was left in the field during the subsequent kharif season, not only increases the productivity of soybean-based cropping systems but also improves the soil health.
- Decision support system for soybean insects and diseases was developed for identification and management of soybean insects.

## News and events

### Foundation Day of the Institute

Institute celebrated its 33rd foundation day on 14.12.2019. The foundation day lecture on "The chronology and development of the institute" was delivered by Dr A.N Sharma (Principal Scientist, Entomology). He presented the glimpses of contributions of ex-directors and administration in development of infrastructure and lab facilities and emphasized the role of scientific, technical and supporting staff in development of the Institute. In his address, he urged young scientists to gain research and field experience from the seniors in their respective research areas for the strategic planning and execution of research activities.

**Dr A.N. Sharma, Principal Scientist, Entomology, delivering foundation day lecture**

### Celebration of constitution day

26th November 2019 was celebrated as 'Constitution Day' to commemorate the adoption of the Constitution of India. During the event, 'Preamble to the Constitution' was read by all the officers and staff members of the Institute. A documentary on 'Making of the Indian Constitution' was also played. Eighty-three members have participated in the event including a group of 24 female farmers. To create awareness among the staff about fundamental duties enshrined in the Constitution of India, different activities like invited lectures, quiz competitions etc. were planned in the Institute from 26 November 2019 to 26 November 2020.

**Dr V.S Bhatia, Director, ICAR-IISR, reading pledge on the event of constitution day**

### DST sponsered meeting

ICAR-IISR Indore hosted a DST sponsored programme on advisory and monitoring committee (PAMC) of network project programme on 'Imaging spectroscopy & Application' (NISA) during Nov 29-30, 2019. In this meeting, besides DST officials there were 8 field experts and 9 theme coordinators presented the outcome of NISA network programme and prepared a future roadmap. All the projects were reviewed by the experts under the charmanship of Dr. VK Dadhwal, Director, Indian Institute of Space Science and Technology (IIST),Thiruvananthapuram, Kerala and Dr M.P. Sharma, Principal Scientist (Agri Microbiology) was acted as organizing secretary of the meeting.

Dr. S.D Billore, Director, In charge, Welcoming Dr. V.K Dadhwal, Director, IIST, Thiruvananthapuram

**Guest lectures**

ICAR-IISR organized several guest lectures from eminent scientists across globe. Dr Lee Hickey (Plant breeder and crop geneticist, Queensland Alliance for Agriculture and Food Innovation at The University of Queensland, Australia) delivered a lecture on most happening topic "Speed breeding to accelerate crop improvement". He emphasized on the methodology of speed breeding developed for wheat, barley and other long day plants. He discussed its importance in soybean crop improvement and its possible modifications so as to suit for short day - crops like soybean for rapid generation advancement. Dr. Rajeev K Varshney (Research Program Director - Genetic gains, ICRISAT) has delivered a lecture on the topic "Genomics advances to accelerate breeding process in legumes". He has focused mainly on translational genomics and discussed about the progress in genomics of chickpea for various economical traits and emphasized on the current status on role of molecular breeding in development of varieties.

Dr. S.P. Tiwari, Former DDG (Edn & CS) and Chairman RAC urged the scientists to employ the speed breeding technique in soybean for rapid advancement of segregating generations thereby reducing the time for development of new soybean varieties. Similarly, Dr. D.M. Hegde (Ex Project Director ICAR-IIOR, Hyderabad and member RAC) has delivered a lecture on the topic "Best Management Practices to Improve Crop Response to Fertilizers". In his talk, he has mainly focussed on the best economical methods to improve total factor productivity and partial factor productivity of the crop. He has also emphasized on the importance of the concept of nutrient use efficiency under climate change scenario and explained about different feasible agronomic practices to improve nitrogen and phosphorous use efficiency in agriculture.

Dr Lee Hickey, University of Queensland, Australia delivered a lecture on "Speed breeding to accelerate crop improvement"

Dr Rajeev K Varshney, ICRISAT, Hyderabad delivered a lecture on "Genomics advances to accelerate breeding process in legumes"

Dr. D.M. Hegde, member RAC, Delivered a lecture on "Best Management Practices to Improve Crop Response to Fertilizers"

Field visit of ICAR-IISR, Scientist during the soybean season to monitor various insect pests and diseases.

## Transfer of Technology

### Soybean disease and insect pest monitoring, and pathogen profiling

To assess the extent of soybean disease and pest severity, upon the request from state agriculture department, intensive roving survey was conducted during *Kharif* 2019 across major soybean growing areas of districts viz., Indore, Ujjain and Dewas. Fields were assessed for disease and insect severity on 0-9 scale. In each district, due to continuous raining and lack of awareness on effective insecticides, gram pod borer severity was increased up to 50-90 % in terms of leaf area damage. To control the same, farmers were advised to spray indoxacarb 14.5SC@ 0.5 L /ha or Chlorantraniliprol 18.5 SC @ 0.15 L /ha by using 500 L of water per hectare. Soybean anthracnose severity was less to moderate depending upon maturity period of the varities. For its management, farmers were advised to spray thiophenate methyl @ 1 kg/ha or tebuconazole @ 625 ml/ha or tebuconazole + sulphur 1 lit/ha or hexaconazole @ 500 ml/ha or pyroclostrobin @ 500 g/ha using 500 litre of water for effective management of the soybean anthracnose disease. Farmers were also advised to follow seed treatment with thiophenate methyl + pyroclostrobin @ 3 mL/kg of seed for management of soil borne diseases and to mix zinc sulphate 25 kg and borax 0.5 kg in soil at time of field preparation.

## Farmers' field School

Farmers' field school was organised during 12/09/2019 to 13/09/2019 in the villages Bafapur, Kothari, Kheri, Naplakhedi and Bhilkhedi of Sehore district. Around 25-30 farmers from each village have participated in the Farmers' field school. Farmers were given detail information with regard to soybean cultivation in view of the changing climate. Information about conservation tillage in soybean crop, good soybean practices and benefits of BBF machine under adverse climatic conditions were the main topics covered. Besides suggested best management practices for major pest and diseases and suitable varieties to be grown to achieve maximum income.

Organisation of Farmers' field school in the villages of Sehore district

## Hands on training on hybridization

ICAR- Indian Institute of Soybean Research organized three days (August 29-31, 2019) hands on training programme on soybean hybridization technique. A total of 14 participants working under AICRP on soybean were attended and practiced hybridization in glass house, net house, and field. The training session started on 29th August 2019, 7.45 AM. In the training protogyny nature and pollination without emasculation technique was demonstrated through a documentary video and photographs to increase the efficiency of successful cross. All the trainees expressed their confidence in doing hybridization without doing emasculation in subsequent seasons.

**Glimpses of hybridization training conducted at ICAR-IISR, Indore**

## Organization of Germplasm day

Institute organized a one-day workshop on Germplasm day on 13 September 2019. Ten plant breeders from different AICRP centre participated in the event. Dr Sanjay Gupta, Principal scientist and In charge, crop improvement section presented the details of germplasm being maintained at ICAR-IISR followed by interaction of the participants with Director, IISR. Participants made visits to germplasm planted at glasshouse and net house and witnessed various germplasm accessions grown for characterization.

**Interaction of Participants of Germplasm day with Director ICAR-IISR**

**One Day Farmers' Training Programmes on Improved Soybean Production Technology:** During this period, 59 Farmers' Training Programmes of day long duration were organized with the cumulative participation of 1943 farmers belonging to different districts of Madhya Pradesh, Maharashtra and Rajasthan. All the recommended package of practices including agronomic, moisture conservation techniques during the stress period, integrated approach of managing weeds, insect pests and diseases etc. as well as processing aspects of value added soy products were covered in these training programmes which were facilitated in participatory mode.

## Training and capacity building.

During the period institute has trained 105 field level officers belonging to private agencies as well as input dealers through Trainers' Training Programmes. The details of one of the model training course is presented below.

| Title of the training | Date | Sponsor/Collaborator | No. of Participants |
|---|---|---|---|
| Model Training Course on Climate resilient technologies and practices for soybean production | 4 -11 September 2019 | Directorate of Extension, Ministry of Agriculture & Farmers' Welfare, GOI, New Delhi | 23 |

**Women's Training Programme on Processing and Utilization of Soybean**: Eleven training programmes on "Processing and Utilization of Soybean for Food Uses at household level" were organized with the participation of 811 women belonging Madhya Pradesh and Rajasthan respectively.

Inaugural Session of Model Training Course (MTC) - 2019

Feedback of Trainee Participants During Valedictory Programme of MTC - 2019

Farmers' Training Programme on Improved Soybean Production Technologies

Farmers' Training Programme on Improved Soybean Production Technologies Under Atma

Visit of farmers to the institute demonstration plot

Farmers visit to the Institute

## Public private partnership program (PPP mode)

ICAR-IISR Indore and ITC Bhopal jointly organized a training programme for the farmers of five districts of Madhya Pradesh to adopt BBF and new crop production technology in soybean wheat crop. This program has been taken up to sustain the soybean and wheat crops under irregular monsoon pattern due to climate change. Dr D V Singh, Principal Scientist (Farm machinery and Power) acted as nodal officer and trainer of BBF and permanent BBF technology.

**Overview of training programme organized at ICAR-IISR in PPP mode**

## Other Institutional Activities

**Vigilance awareness week** : The Vigilance Awareness Week was observed at ICAR-Indian Institute of Soybean Research during 28th October to 2nd November 2019. The Vigilance Awareness Week was inaugurated on 28th October 2018 along with Integrity Pledge which was administered to the institute staff by Honb'le Director ICAR-IISR, Dr. V.S. Bhatia. During this week, four competitions were conducted at ICAR-IISR with the participation of institute staff. These included Essay Competition on 29th October (Topic-Integrity: A way of life), Slogan Competition on 30th October, Poster Competition on 31st October and Extempore speech on 1st November, 2019. The Valedictory programme of the Vigilance Awareness Week was conducted on 2nd November along with introductory remark and brief report of the activities conducted under the week followed by the brief address by the Director, ICAR-IISR. The winners of different competitions were felicitated by presenting a certificate and cash award.

Celebration of vigilance awareness week at ICAR-IISR

### *Mera Gaon Mera Gaurav (MGMG)*

The programme is being implemented in 25 villages of Indore districts in which, multidisciplinary teams of five scientists in each are maintaining close contact with farmers. During kharif 2019, a total of 50 frontline demonstrations on improved soybean production technology have been laid out in the selected villages. Beside soybean, the scientists are facilitating information flow of other agricultural commodities and the agricultural developmental schemes launched by Government of India for the overall development of rural masses.

Distribution of Inputs and Seed Of
Newly Released Varieties under Mera Gaon Mera Gaurav

MGMG Team Interacting With The Farmers

### *Swach Bharat Abhiyan*

The institute is regularly organizing cleanliness drives on last Saturday of every month and taking up the activities for cleanliness and maintenance of office building, laboratories, canteen, farm section buildings, residential campus and various roads located in IISR campus. Under the programme, various activities as outlined in the annual as well as five year plan are being conducted especially organization of, public rally, cleanliness programme at public/tourist places, digitization and weeding out old office records, use of bio-degradable waste for compost making etc.

**Participation in Agricultural Exhibitions**: The Institute has actively participated in following four agricultural exhibitions during the year.

| Date | Event | Organized by | Venue |
|---|---|---|---|
| 25th August 2019 | Wheat Day-cum-58th Annual Workshop of AICRP on wheat | IARI-Regional Wheat Research Station, Indore | Ravindra Natya Griha, Indore |
| 31th August 2019 | Krishi Mela during Jal Shakti Abhiyan | Department of Agriculture, Indore | Krishi Upaj Mandi, Laxmibai Nagar, Indore |
| 13th September 2019 | Krishi Mela during Jal Shakti Abhiyan | Department of Agriculture, Indore | Krishi Upaj Mandi, Sanwer, Distt. Indore |
| 15th September 2019 | Krishi Mela during Jal Shakti Abhiyan | Departmentof Agriculture, Indore | Krishi Upaj Mandi, Depalpur,Distt. Indore |


Honble Secretary DARE & Director General visiting the institute stall during ASC Expo, IARI New Delhi

Honble Secretary DARE & Director General Visiting the Institute Stall During AICRP Wheat Workshop, at Indore

Honble Minister of Higher Education and Sport Shri Jitu Patwari Visitng the Institue Stall during Jal Shakti Abhiyan at Indore


Institute Exhibition Stall durng Jal Shakti Abhiyan in Indore District

## Radio Talk

| Topic | Coordinator | Expert | Date |
|---|---|---|---|
| मौसम के बदलते परिवेश में सोयाबीन की खेती | Dr. Nita Khandekar | Dr. Rakesh Kumar Verma | 04-07-2019 |
| खेत की तैयारी एवं BBF से बुवाई | Dr. Nita Khandekar | Dr. Rakesh Kumar Verma | 16-07-2019 |
| सोयाबीन की फसल में खरपतवार प्रबंधन तथा पोषक तत्त्व प्रबंधन | Dr. Nita Khandekar | Dr. Rakesh Kumar Verma & Dr. Laxman Singh Rajput | 01-08-2019 |
| सोयाबीन की फसल में कीट तथा रोग प्रबंधन | Dr. Nita Khandekar | Dr. Rakesh Kumar Verma & Dr. Laxman Singh Rajput | 16-08-2019 |
| कटाई,गहाई एवं बीज प्रबंधन तथा आगामी फसल के लिए सुझाव | Dr. Nita Khandekar | Dr Rakesh Kumar Verma & Dr Subhash Chandra | 01-10-2019 |
| गेहूँ की फसल के लिए खेत तथा बीज की बुवाई का तरीका | Dr. Nita Khandekar | Dr AK Singh | 14-10-2019 |



ICAR-IISR Scientists delivering radio talks on recent problems of soybean crop.

## Promotions

| Name | Promoted as | W.e.f |
|---|---|---|
| Shri Devendra Pratap Singh | Senior Technical Assistant | 09.06.2014 |
| Dr. Rajkumar Ramteke | Senior Scientist (Plant Genetics) from PB-3 to PB-4 | 17.01.2015 |
| Dr. Punam Kuchalan | Senior Scientist (Seed Technology) from PB-3 to PB-4 | 16.02.2018 |
| Shri Shambhu Nath Verma | Technical Assistant | 06.10.2019 |
| Shri I.R. Khan | Technical Officer | 31.10.2019 |

## Deputations / Selection

| Name | Deputation / Fellowship | w.e.f. |
|---|---|---|
| Dr. Giriraj Kumawat Scientist (Sr. Scale) (Biotechnology) | Japan International Research Cenre for Agricultural Science (JIRCAS), Tsukuba, Japan | 01.10.2019 to 30 Sep. 2020 |

## Transfers

| Name | From | To | w.e.f. |
|---|---|---|---|
| Dr. Manoj Kumar Srivastava Principal Scientist (Plant Biochemistry) | ICAR-IGFRI, Jhansi | ICAR-IISR, Indore | 02.12.2019 |
| Dr. Purushottam Sharma Senior Scientist (Agricultural Economics) | ICAR-IGFRI, Jhansi | ICAR-IISR, Indore | 03.12.2019 |

## Awards and Recognitions
### Award to Individuals

- Mr. Sanjeev Kumar (Scientist, Plant pathology), Dr Laxman Singh Rajput (Scientist, Plant pathology) and Dr Subhash Chandra (Scientist, Genetics and plant breeding) received Young Scientist Award from Society for Scientific development in Agriculture and Technology at International Conference on Global Research Initiatives for Sustainable Agriculture & Allied Sciences-2019 held during October 20-22, 2019 at ICAR-NAARM, Hyderabad, India


Dr Laxman Singh Rajput and Sanjeev Kumar receiving Young Scientist Award during International Conference on Global Research Initiatives for Sustainable Agriculture & Allied Sciences-2019

- Ms Seema Chouhan won second prize (Silver medal) in three events; long jump, Javelin throw and 200 meter running in ICAR Zonal tournament held at Nagpur during 8-10 November 2019

Ms. Seema Chouhan, Secured three silver medals in ICAR Zonal tournament held at Nagpur

## संस्थान में जुलाई - दिसम्बर 2019 के दौरान राजभाषा-कार्यान्वयन संबंधी विभिन्न गतिविधियाँ

भारतीय संविधान में हिन्दी को संघ की राजभाषा के रूप में स्थापित किया गया है एवं संविधान के भाग सत्रह, अनुच्छेद तीन सौ इक्यावन में वर्णित है कि राजभाषा हिन्दी को इस तरह से विकसित किया जाए ताकि वह भारत की विविध संस्कृति को व्यक्त करने में समर्थवान हो । अत: राजभाषा के रूप में हिन्दी की भूमिक अत्यंत महत्वपूर्ण तथा दायित्व-युक्त है । इस उद्देश्य का वहन करते हुए भा.कृ.अनु.परि. - भारतीय अनुसंधान संस्थान, इन्दौर में राजभाषा हिन्दी के प्रसार-प्रचार हेतु अनेकानेक कार्यक्रम किए जा रहे है । जिनका स्वरुप भारतीय सोयाबीन अनुसंधान संस्थान में राजभाषा कार्यान्वयन के क्षेत्र में उत्तरोत्तर प्रगति के साथ दृष्टिगोचर होते हैं, जो राजभाषा के प्रगामी प्रयोग में अत्यंत सार्थक सिद्ध हो रहे है । इस क्षेत्र में किए जा रहे क्रियाकलापों का संक्षिप्त विवरण निम्न हैं :

| क्र. | दिनांक | विषय | अतिथि वक्ता |
|---|---|---|---|
| 1 | 07 सितम्बर 2019 | विश्व स्तर पर हिन्दी भाषा का प्रभाव | श्री हरेराम बाजपेयी, प्रबंध संपादक - वीणा, इन्दौर |
| 2 | 16 दिसम्बर 2019 | कृषि अनुसंधान के सप्रेषण की भाषा हिन्दी- प्रमुख आयाम | डॉ. पद्माश्री शर्मा विभागाध्यक्ष, इंस्टिट्यूट ऑफ आर्ट्स एण्ड ह्यूमेनिटिज सेज यूनिवर्सिटी इन्दौर |

**क) राजभाषा नियम,** 1976 के नियम 8 का अनुपालन : संस्थान के अधिकारी एंव कर्मचारी शासकीय कार्यों हेतु राजभाषा नियम, 1976 के नियम 8 के उपनियम (1) तथा (4) के अनुसार लिखे जाने वाली टिप्पणियाँ एवं अन्य कार्य हिन्दी में करते है ।

**ख) राजभाषा कार्यान्वयन समिति की तिमाही बैठक**

- प्रथम बैंक : दिनांक 06 जुलाई 2019
- द्वितीय बैठक : दिनांक 05 अक्टूबर 2019

**ग) हिन्दी कार्यशालाएं :** संस्थान के अधिकारियों एवं कर्मचारियों की हिन्दी में कार्य करने के दौरान होने वाली समस्याओं के निराकरण हेतु संस्थान में हिन्दी कार्यशालाओं का आयोजन किया जाता है । इसके अतिरिक्त कार्यशालाओं के आयोजन का मुख्य ध्येय यह भी होता है । कि हिन्दी का प्रयोग किस प्रकार सरल से सरलतम् की ओर बढ़ाया जा सकता है । इसलिए प्रत्येक तिमाही में कम से कम एक हिन्दी कार्यशाला का आयोजन किया जा रहा है ताकि संस्थान के सभी सवर्गों में हिन्दी में कार्य संपन्न करने का रूझान में उत्तरोत्तर प्रगति हो सके । इस उद्देश्य हेतु संबंधित विषयानुसार कार्यशालाएं सम्पन्न की जाती है । जुलाई-दिसम्बर 2019 में अब तक 02 कार्यशालाओं का आयोजन किया गया, जिसकी सूचि इस प्रकार से है :

**घ) प्रशिक्षण :** संस्थान में राजभाषा के प्रचार-प्रसार हेतु कृषकों एवं प्रशिक्षणार्थियों को प्रशिक्षण संबंधित सारी सामग्रियाँ हिन्दी में प्रदान की जा रही है ।

**ड) शब्दकोष में वृद्धि :** संस्थान में प्रतिदिन एक शब्द हिन्दी एवं अंग्रेजी को द्विभाषी रूप में "आज का शब्द" के रूप में प्रदर्शित किया जा रहा है, ताकि कर्मचारियों, अधिकारियों एवं वैज्ञानिकों के हिन्दी शब्द ज्ञान में वृद्धि करने के साथ ही साथ हिन्दी के कार्यालयीन उपयोग में भी सहायता प्रदान कर सके ।

**च) अनुवाद द्विभाषी प्रपत्र :** संस्थान में कार्यालयीन कार्य में प्रयुक्त होने वाले विभिन्न पत्रों, प्रपत्रों आदि का अनुवाद कार्य भी प्रगति पर है, जिससे दैनेंदिनी के साथ ही प्राय: प्रयुक्त होने वाले सभी प्रकार के पत्रों, पप्रत्रों का द्विभाषी मुद्रित रूप सम्मिलित है । यह कार्य राजभाषा कार्यान्वयन की दिशा में स्थाई एवं आधारभूत उपलब्धि है ।

**छ) राजभाषा तिमाही रिपोर्ट का प्रेषण :** संस्थान में राजभाषा हिन्दी से संबंधित समस्त कार्यों का विवरण तिमाही हिन्दी रिपोर्ट के माध्यम से संबंधित विभागों का ऑनलाईन एवं द्रुतगामी डाक सेवा से प्रेषित किया जाता है । इस कार्य को धरातलीय रूप प्रदान करने में संस्थान के समस्त संबंधित अनुभाग का सक्रिय एवं सराहनीय योगदान होता है ।

**ज) राजभाषा अधिनियम, 1963 की धारा (3) (3) :** संस्थान में राजभाषा अधिनियम, 1963 की धारा (3) (3) से संबंधित दस्तावेजों जैसे : सामान्य-आदेश, अधिसूचनाएं, प्रेस विज्ञप्तियाँ, संविदा, करार, लाइसेंस, पर्मिट, टेंडर के फार्म और नोटिस,, संकल्प नियम इत्यादि को (हिन्दी और अंग्रेजी) द्विभाषी रूप में निकाला जाता है, ताकि राजभाषा संबंधित दिशा-निर्देशों का पालन सतत् होता रहे ।

**झ) यूनिकोड की सुविधा :** संस्थान के अधिकारियों तथा कर्मचारियों की हिन्दी में कार्य करने की रूचि में वृद्धि करने हेतु समस्त कम्प्युटर में हिन्दी यूनिकोड की व्यवस्था प्रदान की गई है, जिससे एक समान फॉन्ट के माध्यम से पूरा संस्थान एक ही दिशा की ओर अग्रसर हो सके ।

**ञ) मौलिक लेखन कार्य का प्रादुर्भाव :** संस्थान में राजभाषा संबंधी विभिन्न क्रियाकलापों के साथ मौलिक लेखन कार्य को द्रुतगामी आयाम प्रदान करने में अधिकारियों एवं कर्मचारियों की रूचि अद्वितीय है । विभन्न प्रतिष्ठित संस्थानों द्वारा इनकी लेखनी को स्थान प्राप्त होते है ।

राजभाषा कार्यान्वयन के क्षेत्र में भा.कृ.अनु.परि-सोयाबीन अनुसंधान संस्थान की प्रगति आख्या की एक स्वर्णिम झलक आपके समक्ष प्रस्तुत है । उपरोक्त गतिविधियों पर यदि दृष्टिपात करें तो ज्ञात होता है कि संस्थान में राजभाषा कार्यान्वयन की दिशा में एक सकारात्मक एंव सार्थक कार्य हो रहा है, जो संस्थान में हिन्दी के सुनहरे भविष्य का आभास कराती है ।

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