

Bharat Ka अमृत महोत्सव



75 years of India's Independence



Report on Celebration of Bharat Ka Amrut Mahotsav

ICAR-CRIJAF

4-7 JUNE, 2021



World
Environment Day

भारत-अमृत-केन्द्रीय पटसन एवं समवर्गीय रेशा अनुसंधान संस्थान

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Report on virtual celebration of

Bharat ka Amrut MahotsavRe

(Commemoration of 75 years of India's Independence)

On

World Environment Day- 6th June, 2021

Theme: Making of Clean and Green India

Azadi Ka Amrut Mahotsav is a series of events to be organised by the Government of India to commemorate the 75th Anniversary of India's Independence. The Mahotsav is being celebrated as a Jan-Utsav in the spirit of Jan-Bhagidari to mark 75 years of independence. During the "Bharat Ka Amrut Mahotsav", commemoration activities are going to be held across the country to showcase India's glorious history, culture, technological development and digital intervention.

The celebration of *Bharat Ka Amrut Mahotsav* in commemoration of completion of 75 years of India's Independence has already been started. During this celebration of more than one year long mega events which is going to be completed on 15th August, 2022; the central government ministries have scheduled programmes to focus on high points of social, cultural, scientific and technological aspects in the country's post-independence journey. The objective behind the 'Mahotsav' is to showcase accomplishments since 1947 so as to instil a sense of pride and to create a vision for 'India@2047' for every Government institution. The commemorations will include 75 events for 75 weeks with one prominent event every week and the programmes.

In this context Indian Council of Agricultural Research has instructed all its Institutes and KVKs to celebrate the event in befitting manner as per the mandate of the institute. Each ICAR institute has been assigned to organize programs based on specific themes correlating with national or international special day related to the commodity the institute is dealing with or the mandate of the Institute.

As ICAR-CRIJAF is entrusted to do research on natural fibre crops which has huge potential towards maintenance of environmental sustainability, the institute preferred to celebrate *Bharat Ka Amrut Mahotsav* on the occasion of WORLD ENVIRONMENT DAY, 5th June, 2021 with the theme- "Making clean and Green India" On this occasion as per the directives of the council, ICAR-Central Research Institute for Jute and Allied Fibres (ICAR-CRIJAF), Barrackpore conducted 3-day webinar series, and on-line drawing and poetry competition from 4-7, June 2021 on the theme of the event as per the following programme schedule.

3-day Webinar Series (Date / Time)	Name of Webinar
04.06.21(2.00-3.00 PM)	Natural Fibre as an Alternative to Plastics
05.06.21(2.00-3.00 PM)	Wealth from Waste and Sustainable Eco-farming
07.06.21(2.00-3.00 PM)	Genome Editing in Bast Fibre Crops
Drawing and poetry competition(Date / Time)	Name of competition/theme
05.06.21(3.00-4.00 PM)	Painting –Alternative to Plastics to Save the Earth
05.06.21(4.00-5.00 PM)	Poetry – The Earth and Environment

Date: 04.06.21

Webinar-I on “Role of natural fibres to replace plastics”

Dr. D. B. Shakywar, Director, ICAR-National Institute for Natural Fibre Technology (ICAR-NINFET), Kolkata was invited to address and chair the first webinar in the series on the topic ‘Role of natural fibres to replace plastics’. In his address Dr. Shakywar appreciated the organizer for choosing a very pertinent topic as the plastics are now omnipresent from the Himalayas to the deep ocean causing the worst pollution and threat to the future generations and all the creatures in this world. He emphasized to create awareness among the people to incline towards use of jute-made products to replace the plastics. The research intervention at this stage must focus to grow better quality finer fibres and appropriate product development technology to reduce the cost of such products and make it affordable to the people so that it can compete with the synthetics.

In the beginning of the session, Dr. Gouranga Kar, Director, ICAR-CRIJAF in his introductory remarks of the programme told that the natural fibres particularly jute will see its golden days again as the most ideal fibre to replace plastics and save the environment. He expressed that this is the right time to think about replacement of plastics with jute as it will help Indian farmers and industries as well the country to be Atma Nirbhar in the front of jute products.

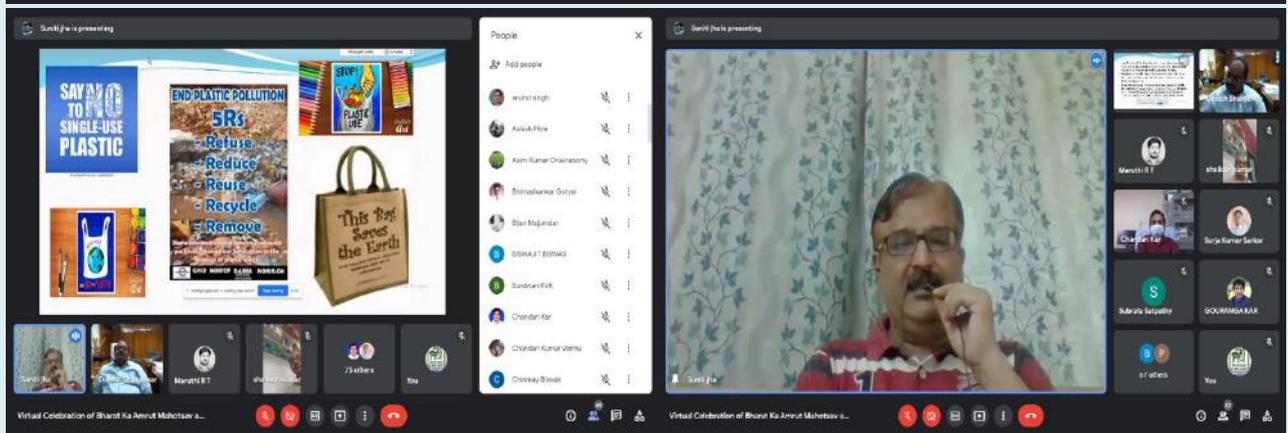
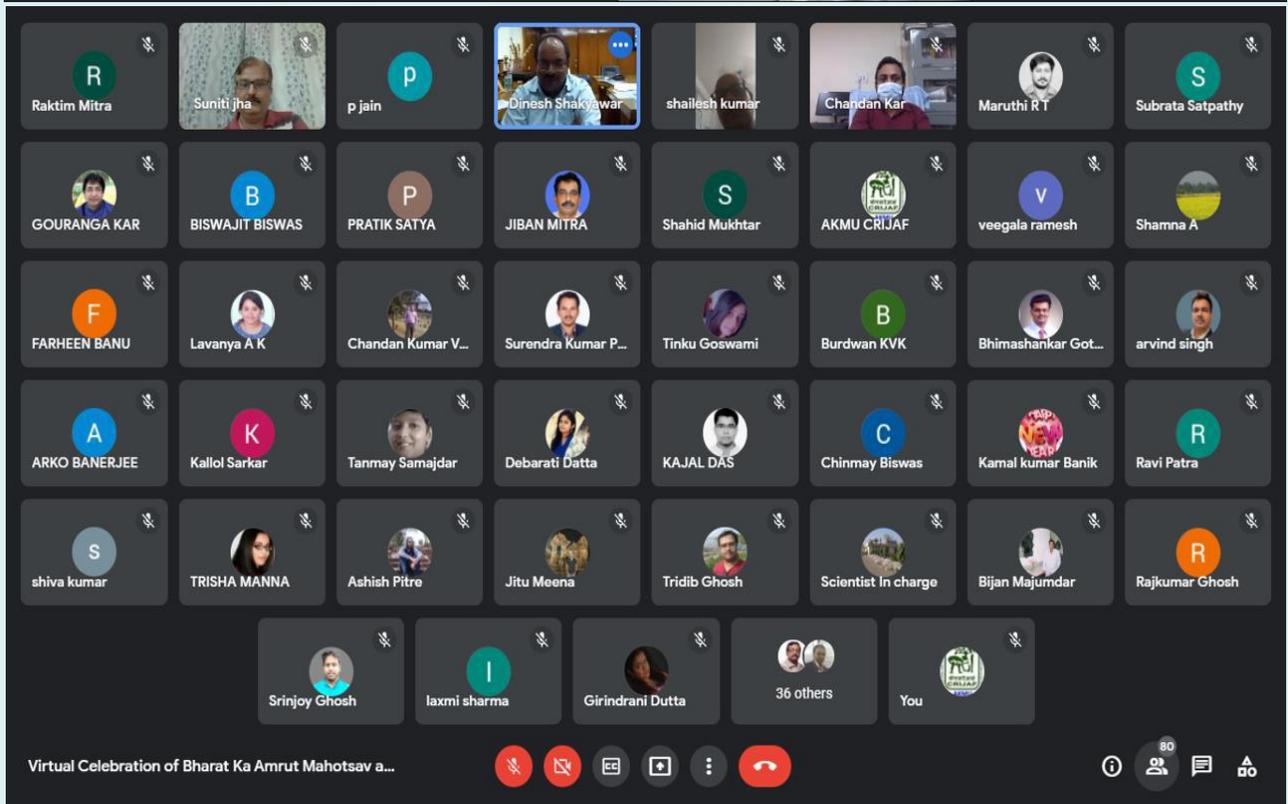
Dr. S. K. Jha, Principal Scientists, ICAR-CRIJAF, in his lecture explained about the different kinds of pollution caused by the plastic waste, the negative impact of plastic on agriculture, wild life, aquatic life, marine ecosystem and human health. Dr. Jha explained the reasons for seeking alternatives to plastic and why natural fibres, especially jute fibre, can be good alternative and the strategies to be framed to meet the requirement of jute fibres in the domestic market and export.

In his special remarks Dr. Gouranga Kar, Director, ICAR-CRIJAF expressed concern over plastic pollution and emphasized that the technologies and road map have been framed to achieve the future demand of jute fibres in case of phasing out of single use plastics. There will be additional requirement of more than 8 lakh bales per year due to the renewed demand of jute shopping bags created in the country and abroad. CRIJAF has adequate technologies and road map to generate the required growth in jute productivity in coming decades so that the jute diversified products can completely substitute the plastics.

In the Chairman’s remarks, Dr. D. B. Shakywar, Director, ICAR- NINFET, Kolkata advocated strong linkage and coordination between the various stakeholders to make the jute sector more vibrant. He was confident that joint effort of both the institutes and favourable policy back up by the Government will help to play major role by the raw jute sector in replacing the plastics.

All the employees of ICAR-CRIJAF, its regional stations, KVKs and also from ICAR-NINFET, Kolkata joined in this webinar. Total number of 83 participants was linked to this programme.

Glimpses of Webinar-I



Date: 05.06.21

Webinar-II on “Wealth from waste and Eco farming”

The second webinar **on the topic** “Wealth from waste and Eco farming” was scheduled on the occasion of WORLD ENVIRONMENT DAY. The title was much relevant to the theme of this year’s environment day i.e., “Ecosystem restoration” as proper recycling of waste and eco-farming can reduce and recycle the waste to generate wealth and contribute positively in restoration and sustenance of environment. Dr. B. K Das, Director, ICAR – Central Inland Fisheries Research Institute (CIFRI), Barrackpore addressed in this occasion. He expressed that the ICAR institutes has great responsibility to develop technologies which have very high environmental viability. Such technologies must reach to the farmers, industries and other stakeholders on priority so that the pollution and environmental degradation in agriculture and aquaculture can be restricted to great extent.

Dr. Gouranga Kar, in his special remark on the “WORLD ENVIRONMENT DAY” highlighted the great potential of natural fibres towards the ecosystem services. Lack recycling of agricultural waste and its improper use has reduced the quality of natural resources which is a great concern in times to come. He emphasized that the cultivation process and the products developed from natural fibres are environment-friendly. There are huge possibilities and scope to convert by-products and other agricultural waste of jute and allied fibre crops to wealth like, bio-char, compost, fuel blocks, manures and other industrial products. He stressed that agricultural technologies must take in to account the economic and ecological benefit so that such technologies will be more sustainable in maintaining the productivity, quality, soil health and the environment in totality.

Dr. A. K. Singh, Principal Scientists, ICAR-CRIJAF delivered in his virtual lecture informed that improper management of agricultural waste has been contributing towards mounting air, soil and water pollution. India generates about 500 million tonnes of agricultural waste and 62 million tons of municipal solid waste every year, which generate obnoxious gases and GHGs around the landfill sites. The huge quantity of agricultural and municipal waste generated in the country can very well be converted to wealth through application of proper technology. Proper collection, disposal and treatment of such waste can generate electricity and green fertilizer for use in agriculture. There are number of technologies available for wealth creation utilizing various waste material generated during agricultural activities for sustainable eco-farming and to create employment opportunities in the rural areas that will in turn contribute towards a strong and *Atmanirbhar Bharat*.

Dr. B. K. Das, Director-CIFRI, Barrackpore, the Chairman of the session told that it’s high time to act proactively to translate the technologies to create wealth from agricultural waste for the benefit of the farmers and the environment.

All the employees of ICAR-CRIJAF, its regional stations, KVKs and also from ICAR-NINFET, Kolkata joined in this webinar. Total number of 82 participants was linked to this programme.

Glimpses of Webinar-II

Wealth from Waste and Sustainable Eco-farming
 + A.K. Singh, ICAR-CRIJAF

World Environment Day
 Bharat Ka Amrut Mahotsav

Biomass burned (92 Mt/yr)

Cereal, Fibre, Oilseed, Sugarcane

Drawing and Poetry Competition

On the eve of the World Environment Day, drawing and poetry competitions were organized among the staffs of the institute and their family members on the theme “Alternative to plastics to save the earth” and “Earth and environment” respectively. Twenty seven participants including children took part in these completions and expressed their thought and concern to save the environment.

Innovative paintings on Alternative to plastics to save the earth



Date: 07.06.21

Webinar-III on “Genome Editing in Bast Fibre Crops”

The third webinar in the series was chaired by Dr. Gouranga Kar, Director, ICAR-CRIJAF, Barrackpore in which Dr. Subhojit Datta, Principal Scientist, ICAR-CRIJAF delivered a lecture on “Genome Editing in Bast Fibre Crops”.

In the beginning of the session, Dr. Gouranga Kar, Director, ICAR-CRIJAF in his introductory remarks highlighted the importance of advance biotechnological tools in improvement of bast fibre crops particularly in breaking the yield barrier and urged that such type expertise need to be incorporated in the research programmes. Considering the narrow genetic base of jute and allied fibre crops such technologies have very specific role in development of varieties with special traits.

Dr. Subhojit Datta, Principal Scientist, ICAR-CRIJAF presented a very comprehensive lecture regarding the genome editing technology, its strength, regulatory aspects of genome edited crops and a roadmap for its application in improvement bast fibre crops. Dr. Datta expressed that CRISPR/Cas9 genetic scissors discovered by Nobel laureates Emmanuelle Charpentier and Jennifer A. Doudna can change the DNA of animals, plants and microorganisms with extremely high precision. Genome editing was quickly adopted in plant breeding and use of CRISPR-Cas 9 in plants was first demonstrated in 2013 followed by use in important food crops, namely wheat rice, maize, tomato etc. ICAR developed transgene free genome edited mega rice cultivar MUT1010 with enhanced yield and stress by editing four different genes. Till date the CRISPR/Cas9 genome editing tool has not been applied for jute genome modification. However, editing jute genome offers potential to develop, low lignin jute for specialty and industrial application, resistance to biotic stresses, tolerance to abiotic stresses and herbicide tolerance.

Dr. Gouranga Kar, Director, ICAR-CRIJAF in his Chairman’s remark told that this is high time to prepare a concrete, time bound road map to utilize this technology in JAF crops. He also emphasized to be realistic in framing research programme considering the expertise available and through possible collaborations so that the target can be achieved in a specific time frame.

In the concluding session of the 3-day programme a report of the 3-day programme and the name of winners of different competitions were presented. All the senior officials of the Institute expressed their views on *Bharat Ka Amru Mahotsav* and the outcome of the webinars. Director in his concluding remarks expressed satisfaction over the successful completion of the programme. The programme ended after formal vote of thanks to the chairs and all other who organized the programme in a befitting manner.

All the employees of ICAR-CRIJAF, its regional stations, KVKs and also from ICAR-NINFET, Kolkata joined in this webinar. Total number of 70 participants was linked to this programme.

Glimpses of Webinar-III

Subhojit Datta is presenting

7th June 2021
World Food Safety Day

Genome Editing in Bast Fibre Crops

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Subhojit Datta is presenting

Genome editing tools in plants

Magnificase Zinc finger nucleases TALEN CRISPR/Cas9

Double strand break

Microhomology-mediated end joining (MMEJ) Homology-directed repair (HDR)

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