



CROP AND WEED SCIENCE NEWS

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December, 2019 to July 2020

International seminar on “AGRISKILLS FOR CONVERGENCE IN RESEARCH, INDUSTRY & LIVELIHOOD (ACRIL 2019)” was organised by the Crop and Weed Science Society (CWSS) during 28th November 2019 to 1st December 2019.



The Inauguration of this international Seminar was held on November 28, 2019 at 10 a.m at FACC, BCKV, Kalyani, in presence of more than 600 delegates including the Invited dignitaries, Invited keynote and lead speakers, oral and poster presenters, research scientists of institutions and industries, students, farmers, NGOs, press and media persons. The Inaugural session was chaired by Honourable Vice Chancellor, BCKV, Dr. D. D. Patra. Among other dignitaries addressed the occasion were Mr Pradip Majumder, Honourable Advisor to the Chief Minister of West Bengal, Mr Subrata Mondal, Chief General Manager, NABARD, Kolkata; Prof. Purnendu Biswas, Vice Chancellor of WBUAFS; Prof. Samunder Singh, Vice President of International Weed



Science Society, USA, Dr S R Patra, Director of Agriculture, Govt of West Bengal; Prof. S K Sanyal, former Vice Chancellor, BCKV. Prof. Ricardo Esteban Labrada of Valencia, Spain and Prof. Tapas K. Biswas of CSIRO, Canberra, Australia delivered the key note addresses. In his key note Prof Labrada stressed up on improved weed management for increased food production in developing countries while Prof Biswas talked about impacts of climate change on water quality of freshwater resources with particular reference to Australia. There were altogether eight sessions discussing for three days on current issues and development on the theme of the seminar. The proceedings and recommendations of the seminar is available at the <http://cwssbckv.org/>

Impact of COVID 19 on Indian Agriculture

The 85 per cent of small and marginal Indian farmers are one of the hardest hits of the unprecedented situation of ongoing nationwide outbreaks of COVID 19. As an immediate step, the government was compelled to go for the nation-wide lockdown for saving lives by checking the devastating spread of the virus. To protect the vulnerable sections (including farmers) both central and state government declared many schemes/remedies to reduce the adverse impacts of the Corona pandemic. The assistance in terms of cash and food to those who are engaged in informal sector has also been announced. The Indian Council of Agricultural Research (ICAR) has issued state-wise guidelines for farmers to be followed during the lockdown period. The initial occurrence of COVID 19 affected *Rabi* crops like wheat, mustard, and pulses etc which were almost at their respective maturity. The supply of the food grains and other essential commodities, to both rural and urban sufferer, became most challenging. This pandemic situation disrupted agricultural activities as well as supply chain because of transportation

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problems and other issues. It has depressed poultry farmers because of social hoax that chicken are the carriers of COVID-19. Milk and milk products were badly impacted because of the complete shutdown of hotels and restaurants. Inadequate awareness programme and sometimes lack of implementation of proper lockdown guidelines have resulted labour crisis for farm activities. The non-functional supply chains are becoming very critical for food security. We have to maintain physical distancing but for speedy recovery from this situation access to farm activities, access to markets of the farmers must be assured. In order to addressing the crisis, the government's assistance package must include Farmers and Agricultural workers. The home deliveries of essential commodities and E-commerce must be encouraged during this pandemic. We must hope, it will end and new corona free dawn will come soon.



Source:

<https://diplomatist.com/2020/04/13/the-impact-of-coronavirus-on-the-agriculture-sector-of-india>

Significant Contribution of Agri-graduates in War against COVID 19



Director of CSIR - CDRI & World Famous Molecular Biologist Dr. Tapas Kundu, agri-graduate of BCKV(1986 batch) with his team leading in the Nation to conduct the Phase Three & Final Research Trial for the most awaited drug Umifenovir against COVID-19 epidemic. COVID 19 Patients from King George's Medical University & ERA's Medical College will be treated with the this drug soon.

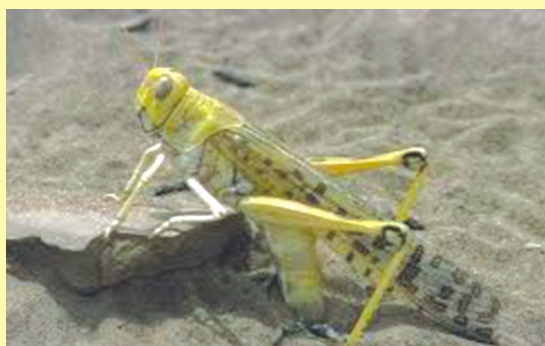
The clinical trial is to evaluate its efficacy in Indian patients. CSIR-CDRI has developed the process technology for Umifenovir and licensed the process technology for manufacturing and marketing the drug to Medizest Pharmaceutical.

War against COVID 19

Dr. Krishna Ella, Chairman & Managing director of Bharat Biotech International Limited and who is also an agriculture graduate developed first Covid -19 vaccine "Co-vaccine".



LOCUSTS – A Plague amid a Pandemic



Source: https://en.wikipedia.org/wiki/Desert_locust

Locusts are collection of insects under the order Orthoptera although cricket and grasshoppers also belong to the same group. Both grasshopper and locusts have same look whereas the antennae of cricket is much longer than the former two insects. Hypothetically it could be assumed that both grasshopper and locust were in the same insect group before 1863 as we find 10 outbreaks of locusts round the world. From Evolution point of view, we can compare from Giraffes to Zebra or Dinosaur to Lizard are the best examples for survival of the fittest. These changes also occur in other order of insects as very few species of moth (Micropterigidae) have articulated mandible and in having never developed coiled proboscis.

In general, with the onset of winter-rain in Baluchistan, south east Arabia, South Iran, the plant population increase and locust also emerged from dormant stage (egg) and starts to feed these plants. The duration of life cycle of any insect including locust also varies with the climate change as it reduced to 35 days from 55 to 60 days and the new generation immediately start lay egg in moist sand. But as soon as egg hatched in the second generation the huge population congregated in dried sand beach and as soon as they come close the serotonin secretion from brain tend to change the locust from solitary to gregarious phase. The gregarious phase of grasshopper are also called locust which move toward another moist sand beaches in search of food either in Pakistan or Western part of India as soon as first shower starts.

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Some other groups swarm toward Europe and Israel but as the Western part of India received highest rainfall in summer 2020 and causes pandemic of locust infestation in India and Pakistan. The wheat, potato, cotton and some vegetables were standing



crops were severely damaged by locust. Statistically the population of locust per kilometre could damage the food for 3500 people. Every time the locust population sustain from 5 to 10 years and if it is not exception the locust infestation may also be expected for another 5 years in India. Although 10 important locust species so far recorded of which Bombay locust *Patangasuccinata* Linn, Migratory locust *Locustamigrataria* Linn and Desert locust *Schisto cercagregara* Forskall are predominant in India. Presently *Schisto cercagregara* Forskall Family Acrididae create pandemic in both India and Pakistan. The mature locust male mate with suitable female and lays up to 500 eggs in moist sand at 5 to 10cm depth for 7 days in different batches and each batch contain 100 eggs. Some other species recently recorded in Bankura and West Midnapur was spotted coffee grasshopper *Aularches miliaris*, Family Pyrgomorphidae are not locust as it does not form any swarm or Plague like locust-[courtesy: Dr. C. R. Sathpathi, Professor, Agricultural Entomology, BCKV]

Bengal farmers reel under severe financial losses due to Amphan

Cyclone Amphan has ravaged the farming sector in at least 14 of the 23 districts in West Bengal and the loss incurred may create an all-time record. According to initial estimates, Hooghly and Birbhum districts have incurred a loss of Rs 600 crore and Rs 462 crore respectively. In East Midnapore, paddy crop in around 30,000 hectares, sesame in around 12,000 hectares and vegetables in around 5,000 hectares of land have been lost due to the cyclone. Betel plant cultivation in the district has also been hit "very badly". In Burdwan, most of the lands where paddy was cultivated have been inundated. Around 50 per cent of the *Boro* paddy was lying in the fields. The mango orchards in Murshidabad district were also badly hit by the cyclone. Around 30 per cent of the mangoes have fallen from the trees during the cyclone. The flower growers of Howrah and Hooghly districts are also severely affected. South 24 Parganas is one of the worst-hit districts. The prices of the farm products have already gone up as the supply chain has been hit. The mango orchards and flower cultivation in almost all districts of West Bengal have been hit severely by the cyclone AMPHUN. Poultry farms have been destroyed in the cyclone. Cyclone Amphan has damaged vegetables across South Bengal. Farmers lost 80 to 90 per cent of crop as fields were flooded with saline water resulting in the land unsuitable for crop cultivation in East Midnapur, North and South 24 Parganas.



Solar Eclipse (Surya Grahan) June 2020 in India



The solar eclipse on 21st June 2020 was an annular eclipse where the Moon is so far from Earth that its relative size fails to cover the Sun completely and leaves the outer rims visible, thus creating a ring of fire in the sky. The annual solar eclipse was started at 9:15 AM IST and were visible until 3:04 PM IST. The maximum eclipse was taken place at 12:10 IST. The eclipse was visible from much of Asia, Africa, the Pacific, the Indian Ocean, parts of Europe and Australia.



Society welcomes newly appointed Vice Chancellor, BCKV

Shri Sajal Ghose joined as Vice-Chancellor, BCKV on 11.06.2020. We have the pleasure to congratulate him on his assignment and wishing him a successful mission. We trust that you will continue to work for the improvement of our academic relationship.



In Birthday celebration of Dr. B. C. Roy on 1st July 2020, Hon'ble Vice Chancellor, BCKV hoisted the University flag in presence of teaching and non-teaching staff of the university.

Proud moments for Society members and Society



Dr. Ratikanta Ghosh, former Professor in Agronomy, Bidhan Chandra Krishi Viswavidyalaya and the president of CWSS, received the Gold Medal Award 2019 of the Indian Society of Weed Science, Jabalpur; the Certificate of Merit 2020 from GIET University, Gunupur and is honoured as the Fellow of Indian Society of Oil Seed Research, Hyderabad for the year 2020 for his lifetime contributions in the field of Agronomy.

Dr. Biplab Mitra, Associate Professor in Agronomy at UBKV, Pundibari, Coochbehar and the life member of the society received "Outstanding Scientist Award" conferred by "The Society of Tropical Agriculture, New Delhi" during 10th International Conference organized by the Society during December, 2019. Dr. Mitra also received Appreciation Certificate from International Agriculture for Development (IaFD), Adelaide, Australia for taking lead role in coordination of international workshops, field research and extension activities, project design and evaluation for Australia-India Council project.



Dr. Malay Kumar Bhowmick, Assistant Agronomist (HQ), West Bengal Agricultural Service (Research), Directorate of Agriculture and also Life member of the society has bagged three awards viz., ISWS Fellow (2019), Indian Society of Weed Science (ISWS), ICAR-Directorate of Weed Research, Jabalpur, Madhya Pradesh; CWSS Fellow (2020), Crop and Weed Science Society (CWSS), Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal; and ISOR Fellow (2020) Indian Society of Oilseeds Research (ISOR), ICAR-Indian Institute of Oilseeds Research, Rajendranagar, Hyderabad, Telangana

Dr. Sanjoy Kumar Bordolui, Assistant Professor, Deptt. of Seed Science and Technology, BCKV and Life member of the Society received "Best Young Faculty Award-2019" conferred by the Novel Research Academy for his outstanding contribution in the field of Seed Science and Technology.



Dr. Subhra Saikat Roy, Senior Scientist, ICAR Research Complex for NEH Region, Manipur Centre National Entrepreneurship Award (Ecosystem Builder Track – Mentor) Ministry of Skill Development and Entrepreneurship, Govt. of India has promoted more than 30 agripreneurship and provided incubation support to more than 50 aspiring and budding entrepreneurs in the field of food processing, organic farming, mushroom, apiculture, commercial horticulture, floriculture, etc.

CONDOLANCE MESSAGE

We are saddened by the sudden and unfortunate demise of our members Prof. Anjan Bhattacharyya, immediate past president of CWSS; Prof Md. Mohasin, Life member of the Society during this time. In this tragic moment, the entire CWSS family stands together in offering our heartfelt condolences to their family. Their loss is irreplaceable and their memories shall always remain with us. We pray to God to give strength to their family to overcome this tragedy.

The society acknowledges the contributors for this issue of the newsletter.

Information collated, processed and drafted by Dr. Md. Nasim Ali & Dr. S. K. Bordolui, on behalf of the CWSS Newsletter Committee, comprised of Prof. S. K. Pal, Prof. J. Tarafdar, Prof. A. B. Sharangi with Prof. K. Brahmachari & Prof. P. Bondyopadhyay, Chief Editors of CWSS Newsletter.

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