ICAR-NRCSS E-NEWS LETTER

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From Director's Desk

First quarter of financial year 2021-22 was started with new ray of hope and all the staff of ICAR-NRCSS, Ajmer got vaccinated. As our social responsibility, all the institute activities were carried out by observing Covid safety protocol. Celebration of 75th year of Independence AjadiKaAmritMahostav was commenced by inaugural lectures of DDG, Horticultural Sciences, ICAR, New Delhi. In the series of lectures seven lectures were delivered by ICAR-NRCSS, Ajmer scientists on different important topics, aspect and issues including awareness campaign on balanced use of fertilizers.I must congratulate the team of scientists involved in developing new improved varieties of seed spices. This year four new seed spice varieties each of celery, nigella, ajwain and leafy coriander was notified in Gazette of India. Effective bio-agents for the management of cumin blight disease identified.Tribal farmers of Pratapgarh districtsuccessfully adopted scientific production technology of seed spices. TFL seeds of improved seed spice varieties produced through FPSP program.Farmers training programmes was organized for seed spices cultivation under SCSP. Institute conducted various HRD activities for capacity building of all seed spice stakeholders.Scientists of NRCSS attended various webinars, training programmes in virtual mode of interaction. Dr Krishna Kant,Principal Scientist, ICAR-NRCSS, Ajmer felicitated by DASD, Calicut for excellent work under the project of pesticide free cumin production technology.Most of the experiments were harvested and post harvest processing was completed. Institute is continue serving the seed spice stakeholders in best of its capability under harsh working environment due to Covid 19.

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Bioactive phytochemicals and nutraceutical products of seed spices will boost trade and exports: Dr. A. K. Singh

Honorable Prime Minister of India Shri Narendra Modi has envisioned the creation of a self-reliant India by the year 2022. We should be aware that our great nation is now just a few weeks away from the 75th anniversary of independence and we are celebrating this as the elixir festival of independence. In this connection a series of lectures was initiated at ICAR-National Research Centre on seed spices, Tabiji, Ajmer. In the inaugural lecture of this program, Dr. Anand Kumar Singh, Deputy Director General (Horticultural Sciences), Indian Council of Agricultural Research, New Delhi said that bioactive phytochemicals and nutraceuticals found in seed spices are not only proving very effective in the epidemic like Corona but they will boost exports and give rise to new business opportunities. This will help the seed spice growers to become self-reliant, as well as these phytochemicals and nutraceuticals will also keep our physical and mental health in perfection.

Dr. Singh added that in the last few years, the demand for seed spices has increased all over the world and exports have gone beyond 4200 Crores every year. This demand will give rise to new industry in India if these bioactive phytochemicals and nutraceuticals found in seed spices are identified and put in use for making nutraceutical products out of them. He told that

now a day there is a lot of need for value added products in the market which people can buy by paying a higher price. In seed spices, there are many possibilities for such value added products. These products include essential aromatic oils, oleoresins, cryo-ground powders, chemical compound based products, etc. He also emphasized on production of chemical pesticides free production of seed spices and adopting precision farming in areas like Rajasthan where climatic conditions are very harsh and rainfall is comparatively very less. The director of the center, Dr. S.N. Saxena told that the institute has initiated the work on these aspects and intensify the efforts in the coming time. Nodal officer of this program, Dr. Arvind Kumar Verma said that this program will run till August 15, 2022, in which weekly lectures by scientists will be done in virtual mode. All the scientists, officers and employees of the institute participated in this program.

बीजीय मसालों के उत्पादों से मिलेगा निर्यात और व्यापार को बढावा

बीजीय मसाला अनुसंधान केंद्र पर अमृत महोत्सव कार्यक्रम शुरू

अजमेर,(नसं.–सरे राह)। तबीजी स्थित राष्ट्रीय बीजीय मसाला अनुसंधान केंद्र पर आजादी का अमृत महोत्सव कार्यक्रम शुरू किया गया। इस कार्यक्रम के उद्घाटन व्या यान में भारतीय कृषि अनुसन्धान परिषद नई दिल्ली के उप महानिदेशक ;बागवानी डॉ. एके सिंह ने बताया कि बीजीय मसालों में पाए जाने वाले बायोएक्टिव फाइटोकेमिकल्स और न्यूट्रास्युटिकल न केवल कोरोना जैसी महामारी में बहुत कारगर सिद्ध हो रहे है, बल्कि ये निर्यात को बढावा देने के साथ साथ नए व्यवसाय को जन्म देंगे, जिससे की किसानों को आत्मनिर्भर होने में मदद मिलेगी। साथ ही साथ ये फाइटोकेमिकल्स और न्यूट्रास्युटिकल हमारे शारीरिक और मानसिक स्वास्थ्य को भी ठीक रखेंगे। उन्होंने बताया की पिछले कुछ वर्षो में पूरे विश्व में बीजीय मसालों की मांग बढ़ी है और प्रतिवर्ष निर्यात 4200 करोड़ के पार चला गया है। ये मांग भारत में नए उद्योग को जन्म देगी। यदि बीजीय मसालों में मिलने वाले फाइटोकेमिकल्स और न्यूट्रास्युटिकल को चिन्हित करके उसके उपयोग का पता लगाया जाए। उन्होंने बताया कि आजकल बाजार में उच्च मूल्य संवर्धित उत्पाद की बहुत जरूरत है, जिसे लोग ज्यादा कीमत देकर खरीद सकते हैं। बीजीय मसालों में इस प्रकार के मूल्य संवर्धित उत्पादों की अनेक संभावनायें हैं। केंद्र के निदेशक डॉ एसएन सक्सेना ने बताया कि आने वाले समय में संस्थान इन सब पहलुओ पर काम करेगा। इस कार्यक्रम के नोडल अधिकारी डॉ. अरविन्द कुमार वर्मा ने बताया कि ये कार्यक्रम 15 अगस्त 2022 तक चलेगा, जिसमें वैज्ञानिकों की ओर से साप्ताहिक व्या यान वर्चुअल मोड में किया जाएगा। केन्द्र के पीआरओ जीके त्रिपाठी ने बताया कि इस कार्यक्रम में संस्थान के सभी वैज्ञानिक, अधिकारी एवं कर्मचारियों ने भाग लिया।

बीजीय मसाला उत्पादों से मिलेगा निर्यात को बढ़ावा : डॉ. सिंह

अजमेर|तबीजी स्थित राष्ट्रीय बीजीय मसाला अनुसंधान केंद्र पर आजादी का अमृत महोत्सव कार्यक्रम शुक्रवार को शुरू किया गया। इस कार्यक्रम के उद्घाटन व्याख्यान में भारतीय कृषि अनुसंधान परिषद नयी दिल्ली के उप महानिदेशक (बागवानी) डॉ. एके सिंह ने कहा कि बीजीय मसालों में पाए जाने वाले बायोएक्टिव फाइटोकेमिकल्स और न्यूट्रास्युटिकल कोरोना जैसी महामारी में बहुत कारगर सिद्ध हो रहे हैं, इनसे निर्यात को बढ़ावा मिलेगा। किसानों आत्मनिर्भर होंगे।

Research Highlights

New varieties of celery, nigella, ajwain and coriander notified

Four new varieties of seed spices namely Ajmer Celery -2, Ajmer Green Coriander -1, Ajmer Nigella-1 & Ajmer Ajwain -73 which were earlier identified for national and state release have been notified wide Statutory order (S.O.) number S.O.1480 (E) dated 1st April, 2021 in the Gazette of India. The salient features of these varieties are given below:

Ajmer Celery-2(ACel-2): This variety was developed by selection method and released at state level. The plants of this variety are erect type which impart thus having resistance to lodging caused by dew. It takes 120-125 days to mature and gives average seed yield 874.3 kg/ha. Its seeds contains essential oil 6.74% which is 17% higher than check variety ACel-1. Aphid

ACel-2

incidence is also low in this variety. Seedlings can be transplanted at 40-45 days after sowing in nursery.

Ajmer Green Coriander-1(AGCr-1): This variety was developed through recurrent selection

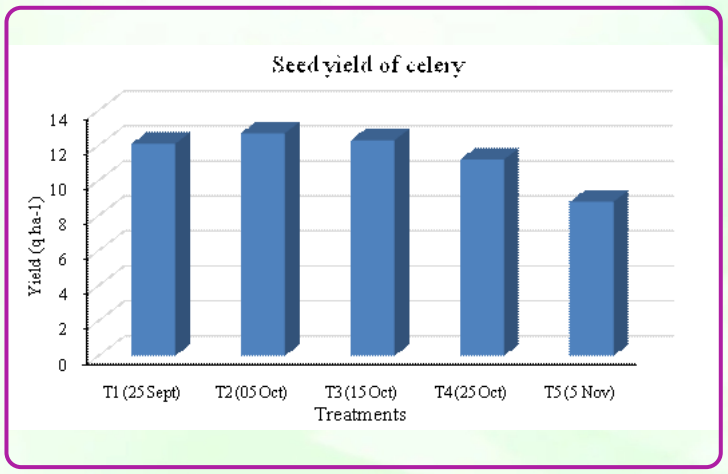
method and released at state level. It was developed exclusively for leaves purpose and also well suited for growing in shade net in summer (off season). The plants are tall erect, seeds are medium in size, oval in shape and suitable for export purpose. Its green leaf contains 0.05% and seeds contains 0.36% essential oil. It takes 50-60 day to for first cutting and gives average yield 74.3 q/ha green leaves in Rabi season. The plants are resistant to stem gall and tolerant to powdery mildew.

AGCr-1

Resiliency of Celery genotype ACel-1 for temperature stress under semi-arid conditions

As agriculture contributes 15 per cent to India's GDP. Climate change presumably causes about 1.5 per cent loss in GDP and by end of this decade, 6-10% yield of staple food will likely to be reduced. Other associated problems will arise with extreme weather events like salinity, sodicity, acidity etc by degradation of soil and irrigation water, hence, edapho-climatic stresses impairs yield and quality of crops. Plants react to stress factors with morphological, physiological and biochemical adaptations designed to increase their resistance to the stress. Therefore, response of celery was assessed at various soil temperatures gradients. Results revealed that that growth and yield parameters were reduced with rise in temperature. About 60 per cent yield reduced with rise in temperature (12-13.0˚C) beyond the optimum level at the time of flowering and maturity. Days to maturity were reduced for about 40 days (from 207 to 167 days). Seed germination was highest at the soil temperature 27.2 to 31.1˚C, however above and below that temperature significant reduction

noticed. Nutrient uptake was also reduced with higher temperature. Availability of nutrient increased and SOC decreased with rise in temperature. Micronutrients will be more limiting factor than macro. Based on the findings resiliency of celery was is 27.0-37.0˚C for optimum performance.

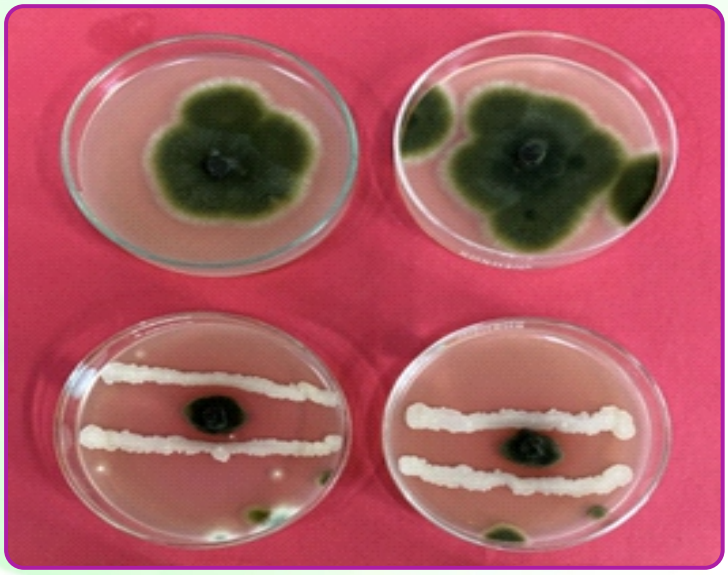


Effect of soil temperature on yield of celery

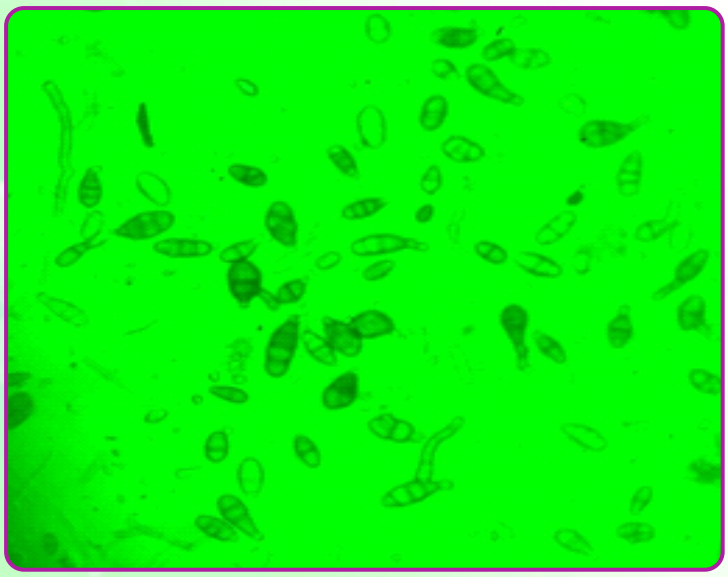
O.P. Aishwath, M.K. Vishal, M.D. Meena and Ravi, Y.

Bio-agents for effective management of cumin blight disease: boon to farmers

Cumin production as well as productivity still remains low due to severe incidence of insect, pest and diseasespests, among them the blight disease caused by *Alternaria burnsii* is one of the devastating disease and hence timely management of this disease is very important. The current management practices available are either less effective or non-ecofriendly as huge quantity of pesticides are being applied by the producers. Therefore an investigation was carried out to address this problem using bio-control agents under the project "Biological management of cumin blight". Among 10 bacterial and 8 fungal bio-agents isolated naturally from rhizosphere and phyllosphere during survey of the seed spices diseases, four of them were found effective against cumin blight pathogen with various degrees. Out of four effective bio-agents isolated, one isolate (B1) was found most effective and inhibited the *Alternaria burnsii* mycelium growth (5.13 mm) up to 90% as compared to control (53 mm).



Mycelium inhibition created by bio-agent



Alternaria spores under microscope

Artificial screening of cumin blight

Inspection of experimental field

This isolate was also found effective under artificial screening of the disease and reduced (DI 9.88) the disease (88%) compare to control (DI 82.3). Under the natural conditions these isolates was also found effective on screening of the disease and reduced (DI 6.55) the disease (85%) compare to control (DI 45). The bio-agent was also used in different formulations and concentrations. The most suitable formulation reported was spraying formulation including 20 percent of original broth with 80 percent water having approximately cfu $1x10^9$ per ml.

R.D. Meena, B.K. Mishra, S.N. Saxena, Y.K. Sharma and N.K. Meena

Success Story

Adoption of scientific production technology of Nigella (Nigella sativa L) by tribal farmers of Pratapgarh district: Intervention of TOT activities of TSP project-A success story

Nigella (Nigella sativum L.) is commonly known as kalonji in hindi and black cumin in english, belongs to Ranunculaceae family. Nigella is used as preservative in chutney, pickle and beverages. It has known for possessing nutritional and medicinal properties and used in preparation of Ayurveda and Unani medicines. ICAR-NRCSS has developed two improved varieties of nigella Ajmer Nigella-1 and Ajmer Nigella-20 along with production, protection and post-harvest technologies of these varieties. Genetic variability in seed oil composition is also studied. Pratapgarh district of Rajasthan having significant tribal population has clay soil with high carbon contents, good quality water and other weather parameters are congenial for nigella cultivation. The area under nigella is around 500 hectare and farmers of this region are used to growing local cultivars/varieties and espousing broadcasting method of sowing and other practices. As a result yield potential of this crop has not been realized up to full extent and compelled farmers to adopt cereal and pulses dominated cropping pattern. In order to enhance yield and productivity of nigella in tribal area, ICAR-National Research Centre on Seed Spices, Ajmer initiated various extension activities in the region since 2015-16 for dissemination of improved production technologies of seed spices to diversify existing cropping pattern. In the series of extension activities, there are 35 front line demonstrations of nigella, limiting 5-10 FLDs per year were laid out on farmer's field of tribal community in three different villages of Arnod block in Pratapgarh district of Rajasthan as Rabi season crop during the year of 2016-17, 2017-18, 2018-19 and 2019-20. The area under each demonstration was 0.25 ha. All inputs like seeds of nigella, variety AN-1, recommended dose of fertilizers (NPK), seed treatment with Trichoderma viride @ 8g/kg seed, weed management by pre-emergence weedicide oxadiargyl @1 lit./ha and pesticides were given under TSP project of ICAR-NRCSS, Ajmer for raising successful crop. The crop was raised with the adoption of recommended package of practices developed by the institute. The follow-up programmes were organized during crop growing period and other farmers were advised to see the performance of the improved technologies in their vicinity. All the demonstrations were monitored by the scientists of NRCSS, Ajmer as well as KVK, Pratapgarh, advised them to implement the provided technologies for overall performance of crop in respect of yield and quality. The data on yield and economics of FLDs was also analyzed and realized higher yield of nigella under FLDs as

compared to local checks in all the four years (2016-17 to 2019-20). The average seed yield of nigella in demonstrations was recorded 7.24, 7.15, 7.46 and 7.96 q/ha in the year 2016-17, 2017-18, 2018-19 and 2019-20, which was 19.67, 19.17, 17.30 and 22.84 per cent higher, respectively over local checks with farmers practices. Mean yield of all the FLDs during four years was recorded 7.45 q/ha which was 19.77 per cent higher over local checks with farmer practices. In FLDs, the mean net return (Rs. 89070/ ha) and benefit cost ratio of (3.32) was recorded which was 19.75 per cent higher over local check with farmer practices. The cumulative effect of technological intervention for increasing yield is on account of adoption of improved NRCSS variety (AN-1), line sowing technique, recommended doses of FYM and fertilizers, weeding before critical stage and plant protection measures for insect-pests and disease management. The year to year variations in cost of cultivation and yield were occurred due to the fluctuations in prevailing social, economic and other ecological conditions of that particular region. Conducting FLDs with improved variety and scientific production technology for continue four years in Arnod block of Pratapgarh district is resulted in realization of higher yield, net return and BCR (3.32) as well as increased awareness of farmers towards adoption of scientific cultivation practices in nigella crop. Farmers are now demanding seeds of improved varieties of nigella and ready to adopt improved PoP. This is very helpful in diversification of existing cropping system in favour of nigella crop in tribal area of Pratapgarh which ultimately improved the livelihood and socio-economic standard of tribal farmers.

Field view of nigella crop in front line demonstration at farmer Sh. Baluram Meena-A tribal farmer of Nauganwa village of Pratapgarh

N. K. Meena, R. S. Meena, G. Lal, S. Lal, M.D. Meena, Y. Kanojia and S.N. Saxena*
**Krishi Vigyan Kendra (MPUA&T), Pratapgarh*

Quality seed production

TFL seeds of improved seed spice varieties produced through FPSP program

Seed production program was undertaken at NRCSS farm as well as on farmers field under FPSP program during 2020-21. Farmers fields were selected in Bharatpur, Ajmer, Pali and Nagaur districts of Rajasthan. Total 24 farmers were selected based on their interest and resource availability for TFL seed production of 10 different varieties of six seed spices crops (Cumin (GC-4), Nigella (Ajmer Nigella-1 & Ajmer Nigella-20), Fennel, (Ajmer Fennel-1 & Ajmer Fennel-2), (Coriander, (Ajmer Coriander-2 and Ajmer Green coriander-1), Fenugreek (Afg-3 & Afg-5) and Ajwain (AA-93). The monitoring team of NRCSS has regularly visited seed production fields at different growth stages of crops. Total 271.1 quintals TFL seeds of different seed spices crops was produced and procured by ICAR- NRCSS Ajmer.

Monitoring of Ajwain seed production field at Gangwana, Ajmer

Monitoring of Ajwain seed production field at Rohisi, Nagaur

Transfer of technologies (ToT)

SCSP programme of ICAR- NRCSS

Sirohi district is well known for fennel production and selected under one district one product scheme of GOI for fennel production. Hence, ICAR-NRCSS planned to demonstrate its fennel variety AF-2 in this district. Thirty FLDs were programmed with all input provided under the scheme SCSP. Initially a training cum seed distribution programme was organized at Hadmatiya (Anadara) on 21-22nd June 2021 in which 30 farmers belongs to SC community were selected and provided with 2 Kg of seeds of variety AF-2 for nursery raising. The programme was coordinated by Dr. N.K. Meena and Dr. M.D. Meena in collaboration with State Agriculture Department, Government of Rajasthan.

During training cum seed distribution programme

HRD activities

J-Gate webinar on effective utilization & product presentation

J-Gate@CeRA is a comprehensive discovery gateway to access research literature from over 2,492+ consortium subscribed journals, covering agricultural sciences and other related domains & access to consortia subscribed journals as well as library subscribed journals through a single platform with resource-sharing facility for the members of the consortium. To enhance the usage and visibility of library subscribed journal resources Informatics Publishing Ltd., Modi Tower, Nehru Place, New Delhi organized an interactive online training cum webinar session for Virtual J-Gate Webinar workshop on J-Gate@CERA for ICAR-NRCSS staff 7th June, 2021.

In this webinar brief overview and introduction to J-Gate platform and features & functionalities (Including new developments) were presented and live product demonstration was given. In this programme all the scientist of ICAR-NRCSS were participated.

ICAR-NRCSS celebrating azadi ka amrit mahotsav

Azadi ka amrit mahotsav is an initiative of the Government of India to celebrate and commemorate 75 years of progressive India and the glorious history of it's people, culture and achievements. This Mahotsav is dedicated to the people of India who have not only been instrumental in bringing India thus far in it's evolutionary journey but also hold within them the power and potential to enable Prime Minister Modi's vision of activating India 2.0, fuelled by the spirit of Atmanirbhar Bharat. The official journey of "Azadi ka Amrit Mahotsav" commences on 12th March, 2021 which starts a 75 week countdown to our 75th anniversary of Independence on 15th August 2022 and will end post a year on 15th August, 2023. Hon'ble Prime Minister Shri Narendra Modi has often shared his vision of building a new, Aatmanirbhar Bharat by the year 2022. You may be aware that our great nation is now just few weeks away from the 75th Anniversary of Indian Independence (Azadi ka Amrit Mahotsav). To commemorate the monumental occasion, all Department and Ministries will host a set of activities for a resurgent, Aatmanirbhar Bharat. In this continuation, ICAR-NRCSS organizing a series of Webinars/Seminars on this occasion from April to June, 2021 total seven webinar have been organised. The topic covered from different aspect of agriculture and seed spices. The convenors of the webinars are Dr. A.K. Verma, Dr. S. Choudhary and Dr. M.D. Meena from NRCSS, Ajmer, Rajasthan.

Lecture organized in *azadi ka amrit mahotsav*

S. No.	Date	Title	Speaker
1.	21.05.2021	Bioactive phytochemicals from seed spices and their utilization in developing health promoting neutraceutical products	Dr. A.K. Singh, DDG, Hort Sciences, ICAR New Delhi
2.	28.05.2021	Organization of work element at ICAR-NRCSS	Dr. S.N. Saxena, Director, ICAR-NRCSS, Ajmer
3.	04.06.2021	Participatory varietal selection	Dr. Shyam S. Meena, Principal Scientist, ICAR-NRCSS, Ajmer
4.	18.06.2021	Balanced use of fertilizers	Dr. Dinesh Arora Professor ARSS, Ajmer, Raj.
5.	25.06.2021	Precision farming in India: Prospectus and challenges	Dr. Ravindra Singh ICAR-NRCSS, Ajmer
6.	02.07.2021	Seed spice crops: Reservoir of predators/parasitoids and pollinators	Dr. Krishna Kant ICAR-NRCSS, Ajmer
7.	09.07.2021	Edaphic stresses and seed spices: Constraints and opportunities	Dr. O.P. Aishwath ICAR-NRCSS, Ajmer

Awareness programme on balanced use of fertilizers

Application of balanced fertilization is the key in enhancing nutrient use efficiency of the applied plant nutrients for maintaining soil productivity. It ensures the application of fertilizers in optimum quantities and in right proportion through appropriate methods, which in turn results in sustenance of soil fertility and crop productivity. Balanced fertilization leads to building up soil health, while imbalanced fertilization leads to soil mining and its sickness. Only soil building leads to a sustainable land use system where most food grain production continues to come from the existing agricultural land. It is well documented that unbalanced availability of nutrients not only produces low and poor-quality yield, but can also lead to mining of soil nutrient reserves which results in short supply. Thus, to obtain higher fertilizer use efficiency, a certain balance among the various nutrients is very essential.

संतुलित उर्वरक उपयोग पर वर्चुअल जागरूकता अभियान

जैव उर्वरको एवं जैविक खाद का उपयोग बढ़ाये

मांगलियावास (हुक्मनामा समाचार)। राष्ट्रीय बीजीय मसाला अनुसंधान केंद्र,कृषि विज्ञान केंद्र एवं कृषि अनुसंधान उप केंद्र अजमेर के संयुक्त तत्वावधान में संतुलित उर्वरक उपयोग जागरूकता पर वर्चुअल कार्यक्रम का आयोजन किया गया। प्रसार वैज्ञानिक डॉ रमाकान्त शर्मा ने बताया की आज देश भर में कृषि से संबंधित विभागो द्वारा उर्वरकों के संतुलित उपयोग हेतु प्रेरित करने के उद्देश्य से उर्वरक उपयोग जागरूकता कार्यक्रम का आयोजन किया गया।डॉ शर्मा ने बताया कि कार्यक्रम के उद्घाटन सत्र में निदेशक,बीजीय मसाला अनुसंधान केंद्र डॉ एस एन सक्सेना ने सभी का स्वागत करते हुए बताया कि उर्वरकों के अंधाधुंध उपयोग को रोकते हुये मिट्टी जांच के आधार पर ही उर्वरक उपयोग करने की सलाह दी।डॉ सक्सेना ने मृदा स्वास्थ्य सुधार हेतु जैव उर्वरको एवम जैविक खादों के उपयोग को बढ़ाने पर जोर दिया।वर्चुअल कार्यक्रम के मुख्य वक्ता कृषि अनुसंधान उप केंद्र के विभागाध्यक्ष ने डॉ दिनेश अरोडा ने पावर पॉइंट प्रेजेंटेशन के साथ मृदा स्वास्थ्य सुधार एवम पोषक तत्वों, जैव उर्वरको की उपयोगिता,वर्मी कम्पोस्ट,संतुलित उर्वरक उपयोग, ड्रिप एवम फेर्टिगेशन से उर्वरको की दक्षता बढ़ाने के उपायों की जानकारी प्रदान की।डॉ अरोड़ा ने अजमेर जिले की मुख्य खरीफ फसलों में पोषक तत्वों की कमी के लक्षण,मांग एवं आपूर्ति के बारे में जानकारी देते हुये उर्वरको के संतुलित उपयोग के चार सिद्धान्त उचित उर्वरक चयन,उचित दर,उचित समय एवम उचित स्थान पर उपयोग पर जोर दिया।वैज्ञानिकों ने संवाद के दौरान पूछे सवालों के जबाब दे किसानों को समाधान सुझाया।कार्यक्रम के अंत मे कृषि विज्ञान केंद्र मुखिया डॉ डी एस भाटी ने उर्वरको के संतुलित उपयोग को अपनाने का आह्वान करते हुये सभी को धन्यवाद ज्ञापित किया।

दैनिक भास्कर किशनगढ़ 19-06-2021

जैव उर्वरकों एवं जैविक खाद का उपयोग बढ़ाएं किसान

संतुलित उर्वरक उपयोग पर वर्चुअल जागरुकता अभियान

जेठाना। राष्ट्रीय बीजीय मसाला अनुसंधान केंद्र, कृषि विज्ञान केंद्र एवं कृषि अनुसंधान उप केंद्र अजमेर के संयुक्त तत्वावधान में शुक्रवार को संतुलित उर्वरक उपयोग जागरूकता पर वर्चुअल कार्यक्रम आयोजित किया गया। प्रसार वैज्ञानिक डॉ रमाकांत शर्मा ने बताया कि कृषि से संबंधित विभाग उर्वरकों के संतुलित उपयोग के लिए प्रेरित कर रहे हैं। इस उद्देश्य से उर्वरक उपयोग जागरूकता कार्यक्रम आयोजित किया गया। कार्यक्रम के उद्घाटन सत्र में निदेशक, बीजीय मसाला अनुसंधान केंद्र डॉ. एसएन सक्सेना ने बताया कि उर्वरकों के अंधाधुंध उपयोग को रोकते हुये मिट्टी जांच के आधार पर ही उर्वरकों का उपयोग करें। वर्चुअल कार्यक्रम के मुख्य वक्ता कृषि अनुसंधान उप केंद्र के विभागाध्यक्ष डॉ दिनेश अरोड़ा ने पावर पॉइंट प्रेजेंटेशन से मृदा स्वास्थ्य सुधार एवं पोषक तत्वों, जैव उर्वरकों की उपयोगिता सहित अन्य विषयों की जानकारी दी। कृषि विज्ञान केंद्र के डॉ. डीएस भाटी ने आभार व्यक्त किया। कार्यक्रम में डॉ. अरविंद वर्मा, डॉ एस के शर्मा, डॉ कृष्ण कांत, डॉ वाई के शर्मा सहित सभी वैज्ञानिकों, कृषकों ने अपनी भागीदारी निभाई।

दैनिक नवज्योति Anchal - 19 Jun 2021 - Pag

म पहुचकर व्यापक नुकसान पहुचाएगा।

संतुलित उर्वरक उपयोग पर जागरुकता अभियान

जेठाना। राष्ट्रीय बीजीय मसाला अनुसंधान केंद्र, कृषि विज्ञान केंद्र एवं कृषि अनुसंधान उप केंद्र अजमेर के संयुक्त तत्वावधान में संतुलित उर्वरक उपयोग जागरूकता पर वर्चुअल कार्यक्रम आयोजित किया गया। प्रसार वैज्ञानिक डॉ. रमाकान्त शर्मा ने बताया कि कार्यक्रम के उद्घाटन सत्र में निदेशक, बीजीय मसाला अनुसंधान केंद्र डॉ. एसएन सक्सेना ने उर्वरकों के अंधाधुंध उपयोग को रोकते हुए मिट्टी जांच के आधार पर ही उर्वरक उपयोग करने की सलाह दी। डॉ. सक्सेना ने मृदा स्वास्थ्य सुधार हेतु जैव उर्वरकों एवं जैविक खादों के उपयोग को बढ़ाने पर जोर दिया। वर्चुअल कार्यक्रम के मुख्य वक्ता कृषि अनुसंधान उप केंद्र के विभागाध्यक्ष ने डॉ दिनेश अरोडा ने पावर पॉइंट प्रेजेंटेशन के साथ मृदा स्वास्थ्य सुधार एवम पोषक तत्वों, जैव उर्वरको की उपयोगिता, वर्मी कम्पोस्ट,संतुलित उर्वरक उपयोग, ड्रिप एवम फेर्टिगेशन से उर्वरको की दक्षता बढ़ाने के उपायों की जानकारी दी। अंत मे कृषि विज्ञान केंद्र मुखिया डॉ. डीएस भाटी ने उर्वरको के संतुलित उपयोग को अपनाने का आह्वान करते हुए धन्यवाद ज्ञापित किया। कार्यक्रम में डॉ. अरविंद वर्मा, डॉ. एस के शर्मा, डॉ. कृष्णकांत, डॉ. वाईके शर्मा सहित वैज्ञानिकों, कृषकों ने भागीदारी निभाई।

Sh. Sunil Kumar Agarwal, AF&AO invited by MNIT, Jaipur to provide training on TSA.

ICAR- NRCSS, Ajmer was imparted a practical training to staff of Malviya National Institute of Technology MNIT, Jaipur dealing with implementation of Treasury Single Account System (TSA) on 25.06.2021 at MNIT, Jaipur

Events/days/programmes/expert lecture etc. organized

World environment day

World environment day was celebrated at ICAR-NRCSS, Ajmer on 5 June 2021. On this occasion Director ICAR-NRCSS, Ajmer planted trees in farm section alongwith Pr. Scientist, Dr. Y.K. Sharma, Dr. R.S. Meena, Sr. Scientist, G.K. Tripathi and Pukhraj Paroda and other farm workers.

Training/Workshop/Seminar/Virtual Meet/Webinar etc.) attended

S. No.	Name of Programme (Training/workshop/seminar etc.) attended	Organized By (Name of Institute)	Date of Programme	Participant (Name)
1.	Virtual Global Summit on "Degraded Land Management to Restore Our Earth	IST	22nd April, 2021	Dr. O. P. Aishwath
2.	Virtually attended multi-stakeholders meeting on " Tackling ethylene oxide residues in food Consignments from India to EU"	Spice Board, Department of Commerce, GOI	15thApril, 2021	Dr. B.K. Mishra
3.	Meeting for discussion on commercialization of public sector varieties to different seed producing agencies.	—	19thApril, 2021	Dr. O. P. Aishwath
4.	Virtually Attended "5th session of Codex Committee on Spices and Culinary Herbs (CCSCH) meetings	Codex Alimentarius, International Food Standards (FAO/WHO), hosted by India.	20th-29thApril, 2021	Dr. B.K. Mishra
5.	Virtual awareness programme on "Sensitization of AI-NPOF centers for organizing mass awareness campaign on Organic farming "as part of celebration of 75 years of India's Independence by ICAR.	AI-NPOF, Modipuram, UP	12th May, 2021	Dr. Shiv Lal

6.	Webinar with Dr R. S. Paroda for a dialogue on India Agriculture, with a focus on performance, opportunities and challenges.	Dr. Ramesh Deshpandey	6th May, 2021	Dr. S. N. Saxena
7.	Attended presentation of new initiatives on vertical framing and pollinators	AKMU, ICAR-IIHR.	14th May, 2021	Dr. S.n. Saxena, Dr. N. K. Meena, Dr. K. Kant and Dr. Shiv Lal
8.	Presentation of new initiatives on protected cultivation	ICAR-IIVR, Varanasi	17th May, 2021	Dr. S.n. Saxena, Dr. Ravindra Singh
9.	Attended e-conference on recent trends in plant pathology.	Indian Society of Plant Pathology.	4th May, 2021	Dr. R. D. Meena
10.	Inaugural lecture was delivered by DDG (HS), Dr. A.K. Singh on "Bioactive phytochemicals from seed spices and their utilization in developing health promoting neutraceutical products".	Lecture series under Azadi Ka Amrit Mahotsav programme	21th May, 2021	All the Scientist staff of ICAR-NRCSS, Ajmer, Rajasthan.
11.	All the staff attended webinar delivered by Director, NRCSS through Zoom meeting on organization of work elements at ICAR-NRCSS, Ajmer.	Lecture series under Azadi Ka Amrit Mahotsav programme	28th May, 2021	All the Scientist staff of ICAR- NRCSS, Ajmer, Rajasthan.
12.	Scientific review of the impact of climate change on plant pests: a global challenge to prevent and mitigate plant-pest risks in agriculture, forestry and ecosystem	FAO (Food and Agricultural Organization)	1th June, 2021	Dr. R D Meena, Scientist
13.	Virtual seminar attended on participatory varietal selection	ICAR–NRCSS, Ajmer (Raj).	4th June, 2021	Dr. R. S. Meena
14.	Virtual training on "Implementation and use of agricultural research management system (ARMS)".	Agricultural Research Management System	8th June, 2021	Dr. R. D. Meena

15.	Virtual review meeting of DUS centre at ICAR-NRCSS Ajmer Rajasthan.	Under DUS centre	24th June, 2021	Dr. R. D. Meena
16.	National webinar on *Trichoderma*: A potential bio-agent for entrepreneurship under organic farming	Department of Plant Pathology, SKNCOA & NAHEP, SKN Agriculture University, Jobner	25th June, 2021.	Dr. R. D. Meena
17.	Annual review workshop of MIDH development programmes held on line virtually (on line).	MIDH	25th -26th June, 2021	Dr. S.N. Saxena, Dr. Y. K. Sharma, Dr K Kant and Dr. N. K. Choudhary
18.	Meeting related to presentation and preparation of SFC/EFC 2021-26 on 9th and 12th June 2021(on line).	SMD Horticultural Sciences	9th -12th June, 2021	Dr. Sanjay Kumar Dr. S.N. Saxena, Y. K. Sharma

Awards/recognition

Dr Krishna Kant, Principal Scientist, ICAR-NRCSS, Ajmer has been awarded by certificate of appreciation by DASD for excellent work done under the pesticide free cumin production project of DASD, Kozikode, Kerala during the year 2020-21.

DIRECTORATE OF ARECANUT AND SPICES DEVELOPMENT
KOZHIKODE, KERALA

Certificate of Appreciation

Dr. Krishna Kant, Principal Scientist, National Research Centre on Seed Spices has done excellent work with outstanding dedication in the implementation of the project on ***"Establishment of 25 ha demonstration plots for pesticide free cumin production in Nagaur district of Rajasthan"*** under the Mission for Integrated Development of Horticulture (MIDH) scheme implemented by this Directorate during the year 2020-21.

His effort in the project has led to the adoption of technology among the farmers which will have a positive effect in the export of cumin in future.

Date: 25/06/2021

Signature of Director
Dr. Homey Cheriyan (DASD)

Publications

Sharma, A., Kumar, S., Mir, J.I., Kumar, R., Sharma, O.C., Lal, S., Kumawat, K.L., Ahmed, N., Singh, D.B., Ganie, M.A., Razvi, S. 2021. Restricting depletion of soil organic carbon by amending nutrient-N input to soils. *Land development and degradation*. 32 (11): https://doi.org/10.1002/idr.3974

Lal, S., Saxena, S.N., Meena, N.K., Meena, R.D., Chaudhary, N., Choudhary, M.K., Shekhawat, N. 2021. Organic fennel production. ICAR-NRCSS e-Leaflet 01/2021, Published by ICAR-NRCSS, Ajmer

शिवलाल, एस एन सक्सेना, एन के मीना, आर डी मीना, नरेन्द्र चौधरी, महेंद्र चौधरी, नेहा शेखावत. २०२१. सौंफ की जैविक खेती. भा.कृ .अनु.प .- रा.बी.म.अनु.केंद्र ई -प्रसार पत्रक 02/2021**, प्रकाशन निदेशक, राष्ट्रीय बीजीय मसाला अनुसंधान केंद्र**

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