July-December 2020 Vol. 2

ICAR-NRCP Newsletter

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Editorial team

Dr. Jyotsana Sharma
Director (Acting)

Dr. P Roopa Sowjanya
Scientist

Dr. NN Gaikwad
Sr. Scientist

Technical Assistance

Yuvraj Shinde
Technical Officer

Directors Message

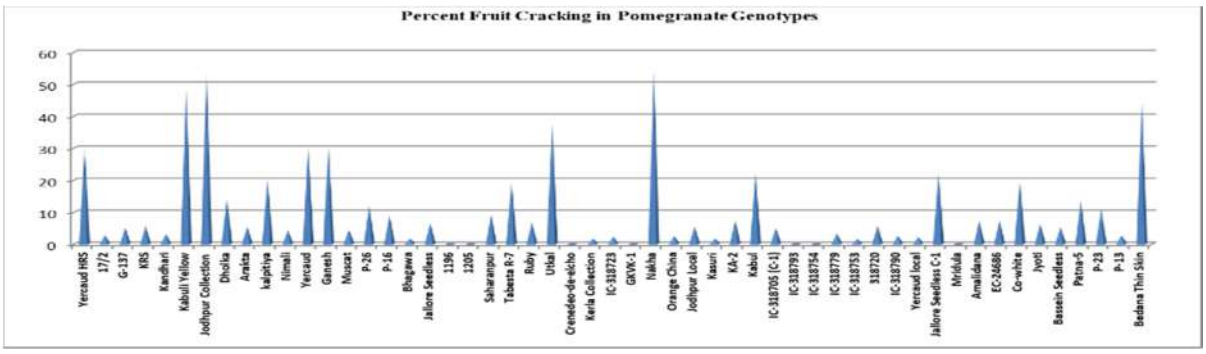
ICAR-National Research Centre on Pomegranate, Solapur, completed 15 years of journey on September 25, 2020. The Centre has accomplished its objectives with visible outcomes during the period and is proud to be the driving force behind the sprawling pomegranate sector in India. The pomegranate sector has recorded constant increase in area, production and productivity since last 8 years. In 2018-19, the pomegranate was cultivated over 2.62 lakh ha, production of 30.04 lakh MT with productivity of 11.58 t/ha and in 2019-20, the export was 80.5 thousand MT. ICAR-NRCP has significantly contributed in improving pomegranate scenario in India through its technologies on combating major diseases, improving fruit yield and quality, providing quality planting material, identifying suitable pomegranate growing areas in India, developing sound package of practices, acting as repository of germplasm for breeding new varieties, giving value addition technologies for complete utilization of fruit, dissemination, commercialization and transfer of technologies, imparting on-site and in-house trainings to stakeholders, etc. The Centre has implemented Government of India schemes, and introduced pomegranate cultivation in different states through Tribal Sub Plan, (TSP), Mera Gaon Mera Gaurav (MGMG) and Scheduled Caste Sub Plan (SCSP) by demonstrations, inputs, Soil Health Cards and technical guidance. The positive feedback different stakeholders including farmers, is the driving force keeps us move forward with commitment. I am grateful to Hon'ble Chairman and members of RAC for guidance and keen interest shaping the research activities of the institute.

Research Achievement

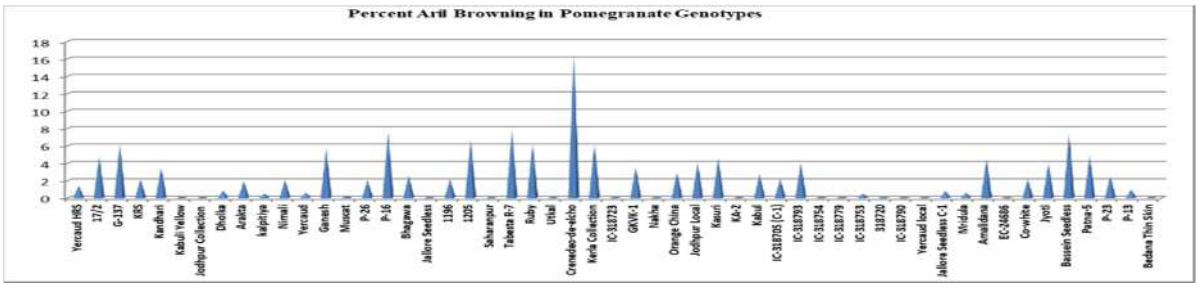
Fruit cracking: During the field evaluation of important pomegranate genotypes for their response to fruit cracking for late *mrig bahar* season fruits, it has been found that the genotypes 'Nakha' (54.04%), 'Jodhpur Collection' (53.33%), 'Kabuli Yellow' (48.15%), 'Bedana Thinskin' (43.96%), 'Utkal' (37.44%), 'Yercaud' (30.10%), 'Ganesh' (30.10 %), 'Kabul' (22.01%) and 'Jallore Seedless' (21.96%) were found to highly sensitive to fruit cracking. However, no cracking was observed in 'Mridula', 'GKVK-1', IC-318793, IC-318754, IC-1196, IC-1205 and in 'Bhagawa' cracking upto 1.7% was observed. Out of various fruit morphological traits only Rind/Aril ratio was found to be negatively correlated with fruit cracking. Rind to aril ratio was found to be negatively correlated with fruit weight.

Aril Browning: During the same period aril browning by aril weight (%) was observed the highest in 'Crenedeo-de-elcho' (16.7%) followed by Tabesta R-7 (7.7%) and 'P-13' (7.5%). Aril browning was found considerably high in 'Ruby' also (6.2%). However, in 'Bhagawa' only 2.6 % aril were affected by aril browning. In genotypes 'Kabuli Yellow', Jodhpur Collection, 'Jallore Seedless', Saharanpur, Utkal, IC-318723, Nakha, KA-2, IC-318754, IC-318779, IC-318720, IC-318790, Yercaud local, EC-24686 and 'Bedana Thinskin' no aril browning was observed.

Correlation matrix of fruit cracking with the fruit quality parameters



Variables	Correlation Matrix				
	Fruit Cracking	Fruit Shape Index	Rind Thickness	Rind/Aril	Fruit weight
Fruit Cracking (FC)	1.000	-0.176	-0.101	**-0.362***	0.093
Fruit Shape Index (FSI)	-0.176	1.000	0.036	-0.028	0.039
Rind Thickness (RT)	-0.101	0.036	1.000	**0.382***	**0.295***
Rind/Aril (R/A)	-0.362	-0.028	0.382	1.000	**-0.343**
Fruit Wright (FW)	0.093	0.039	0.295	-0.343	1.000



Farmer's Corner

Performance of pomegranate variety Solapur Lal under different fertilizer doses

K. D. Babu

Solapur Lal is a vigorous, high yielding variety of pomegranate developed through hybridization. To determine the nutrient requirement of Solapur Lal, an experiment was conducted in five-year-old Solapur Lal with different fertilizer doses viz., 100% RDF, 125% RDF and 150% RDF on ad-hoc basis. The manures and fertilizers were applied in split manner during rest period (immediately after harvesting previous crop), flowering and fruit set period (30DAA) & fruit development period (90 DAA). The results revealed that there was drastic increase in no. of fruits/ plant (138.6), mean fruit weight (278.6g/fruit) and yield (38.61 kg/tree) in 125% RDF compared to 100% RDF. But, beyond 125%RDF, there was not much increase in no. of fruits/tree, fruit weight and yield.

विभिन्न उर्वरक खुराकों के तहत अनार की किस्म सोलापुर लाल का प्रदर्शन

सोलापुर लाल संकरण के माध्यम से विकसित अनार की एक तेजी से बढ़नेवाली और उच्च उपज वाली किस्म है। सोलापुर लाल की पोषक तत्वों की आवश्यकता का निर्धारण करने के लिए, पांच वर्षीय सोलापुर लाल में अलग-अलग उर्वरक खुराकों के साथ जैसे कि १००% RDF, १२५% RDF और १५०% RDF तदर्थ आधार पर एक प्रयोग किया गया। खाद और उर्वरकों को विश्रान्ति की अवधि (पिछली फसल की कटाई के तुरंत बाद), फूल और फल सेटिंग की अवधि (३०DAA) और फल विकास अवधि (९० DDA) के दौरान विभाजित तरीके से डाला गया था। परिणामों से पता चला कि प्रति पौध फलोंकी संख्या (१३८.६), औसत फल वजन (२७८.६ ग्रा/फल) और उपज (३८.६१ किग्रा/पेड़) में १००% RDF की तुलना में १२५% RDF में भारी वृद्धि हुई थी। लेकिन, १२५% RDF से आगे, प्रति पौध फलोंकी संख्या, वजन और उपज में बहुत अधिक वृद्धि नहीं हुई।

(Left :100%RDF, Centre: 125%RDF, Right: 150% RDF)

चित्र : बढ़ी हुई उर्वरक मात्रा के कारण सोलापुर लाल के फलों के आकार में वृद्धि

तालिका: विभिन्न उर्वरक खुराकों के तहत अनार की किस्म सोलापुर लाल का प्रदर्शन

उपचार	फल/ पेड़	फलों का वजन	उपज किग्रा/ पेड़	उपज टन/ हेक्टेर	TSS °ब्रिक्स	अम्लता %	TSS/अम्ल अनुपात
T1 - 100% RDF	123.3	262.5	32.36	23.95	17.6	0.40	44.00
T2- 125% RDF	138.6	280.6	38.89	28.77	17.7	0.39	45.38
T3- 150% RDF	141.3	282.4	39.90	29.52	17.7	0.38	46.5

Mustard formulation against fungal pathogens of pomegranate

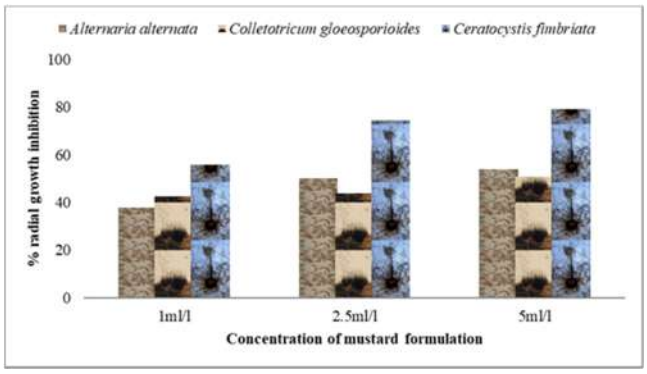
Mllikarjun H. and Jyotsana Sharma

The modified new mustard formulation prepared at CIPHET, Ludhiana was tested against three fungal pathogens of pomegranate *viz. Alternaria alternata* causing heart rot and leaf spot/blight in pomegranate, *Colletotricum*

gloeosporioides the anthracnose pathogen and *Ceratocystis fimbriata* pomegranate wilt pathogen. All the 3 pathogens cause severe losses under favourable weather conditions and are cause of concern to the pomegranate farmers. Though promising chemicals for the control of these diseases are available, yet farmers opting for organic pomegranate cultivation face problems once the disease appears, hence the formulation was tested *in vitro* at 3 doses (1, 2.5 and 5 ml per litre) using 'Poison Food Technique' against these pathogens in December 2020. All the doses of mustard formulation tested checked the pathogen growth above 37%, however highest inhibition was at 5ml/l dose with 53.77% inhibition of *A. alternata* and 50.68 % inhibition of *C. gloeosporioides* and 79.07% of *C. fimbriata* (Fig.1). The *in vitro* tests were encouraging; however, the formulation will be tested in polyhouse and field trials before arriving at final conclusion. In case the formulation is found effective in field trials in checking these pathogens, it will be a promising formulation for organic pomegranate production.

अनार के फफूंद रोगजनकों के खिलाफ सरसों का सूत्रीकरण

सिफेट, लुधियाना में तैयार किए गए परिवर्तित नए सरसों के फार्मूलेशन का परीक्षण अनार के तीन कवक रोगजनकों में जैसे की अल्टरनेरिया अल्टरनेटा जिससे हार्ट रोट और लीफ स्पॉट/ब्लाइट, कोलेटोट्रिकम ग्लियोस्पोरियोइड्स जिससे एन्थ्रेक्नोज और सेराटोसिस्टिस फिम्ब्रिएटा जिससे अनार में विल्ट होता हैं इनके खिलाफ किया गया था। सभी ३ रोगजनक अनुकूल मौसम की स्थिति में गंभीर नुकसान पहुंचाते हैं और अनार किसानों के लिए चिंता का कारण हैं। हालांकि इन रोगों के नियंत्रण के लिए आशाजनक रसायन उपलब्ध हैं, फिर भी जैविक अनार की खेती का विकल्प चुनने वाले किसानों को इस बीमारी की समस्या का सामना करना पड़ता है। इसलिए फार्मूलेशन को ३ खुराक (१, २.५ और ५ मिली/लीटर) में 'पॉइज़न फ़ूड तकनीक' का उपयोग करके प्रयोगशालामें इन रोगजनकों के खिलाफ दिसंबर २०२० में परीक्षण किया गया। परीक्षण किए गए सरसों के फॉर्मूलेशन की सभी खुराकों ने ३७% से अधिक रोगज़नक़ वृद्धि को रोका, हालांकि उच्चतम नियंत्रण ५ मिली/ली खुराक पर था, जिसमें ए. अल्टरनेटा का ५३.७७% नियंत्रण और सी. ग्लियोस्पोरियोइड्स का ५०.६८% नियंत्रण था और सी. फ़िम्ब्रिआटा (चित्र १) का ७९.०७%।



सरसों के फार्मूलेशन सांद्रता का अनार के फंगल रोगजनकों के रेडियल विकास पर प्रतिशत नियंत्रण

Bronopol (95% 2-Bromo-2-Nitro-1, 3-Propanediol) inhibits fungal pathogens of pomegranate

Jyotsana Sharma

The Bronopol (95 % 2-Bromo-2-Nitro-1, 3-Propanediol) is a bactericide used to control bacterial diseases of vegetables and fruit crops. we tested Bronopol against three economically important fungal pathogens of pomegranate *viz. Alternaria alternata* causing heart rot and leaf spot/blight in pomegranate, *Colletotricum*

gloeosporioides the anthracnose pathogen and *Ceratocystis fimbriata* pomegranate wilt pathogen using 'Poison Food Technique' under in-vitro conditions at different concentrations. All the concentrations of bronopol tested checked the pathogen growth above 64 % at lower concentration (0.25 g/L). The radial growth was completely arrested (100 % inhibition) at 0.75 g/L in all the tested fungi (Fig.1 & Plate 1). The *in vitro* tests were encouraging; however, bronopol will be tested in polyhouse and field trials before arriving at final conclusion. In case the bronopol is found effective in field trials in checking these pathogens, it will be a promising chemical to combat bacterial blight & fungal diseases in pomegranate.

ब्रोनोपोल (९५% २-ब्रोमो-२-नायट्रो-१,३-प्रोपेनडायोल) अनार के फफूंद रोगजनकों को रोकता है।

ब्रोनोपोल (९५% २-ब्रोमो-२-नायट्रो-१,३-प्रोपेनडायोल) एक जीवाणुनाशक है जिसका उपयोग सब्जियों और फलों की फसलों के जीवाणु रोगों को नियंत्रित करने के लिए किया जाता है। अनार के तीन आर्थिक रूप से महत्वपूर्ण कवक रोगजनकों (जैसेकि अल्टरनेरिया अल्टरनेटा, एंथ्रेक्नोज और सेराटोसिस्टिस फिम्ब्रिएटा) के खिलाफ ब्रोनोपोल का परीक्षण प्रयोगशालामें में विभिन्न सांद्रता में 'पॉइज़न फूड टेक्निक' का उपयोग कर किया। ब्रोनोपोल परीक्षण की सभी सांद्रता ने कम सांद्रता (०.२५ ग्रा/ली) पर ६४% से अधिक रोगज़नक़ विकास का नियंत्रण किया। सभी परीक्षण किए गए कवक में ०.७५ ग्राम / लीटर पर रेडियल वृद्धि पूरी तरह से नियंत्रित (१००% अवरोध) हुई थी। यदि ब्रोनोपोल क्षेत्र परीक्षणों में इन रोगजनकों नियंत्रित कर पाता हैं, तो यह अनार में बैक्टीरियल ब्लाइट और फंगल रोगों से निपटने के लिए एक आशाजनक रसायन होगा।

Events

Trainings/Workshop/Seminars

ICAR-NRCP has organized a number of trainings for stakeholders like farmers, extension officers, Horticulture department officers and scientists etc. Different need based trainings were also conducted by the center in collaboration with other government institutes like KVKs & SAU. The participants from Maharashtra and other states were part of the training programmes and gained knowledge about pomegranate production, and different management practices and processing aspects.

SN	Name of the Training	Date & Venue	Mode of training	No of Beneficiaries
1.	Anar Utpadan Aur Mulya Samvardhan : Adhunik Takniki	04.08.2020 ICAR-NRCP, Solapur	Virtual	100
2.	National Webinar for Pomegranate Farmers in Different Regions of India on Hasta Bahar Crop of Pomegranate: Package of Practices, Problems and Practical Solution	08 to 10.09.2020 ICAR-NRCP, Solapur	Virtual	100
3.	Pomegranate value addition in Training for Rural Youth in Food Processing Techniques	17.10.2022 KVK Dhule and ATMA Dhule	Virtual	15
4.	Post-Harvest Technology and value addition in pomegranate to Agril. Asst., Agril. Circle officers etc.	20.10.2022 RAMETI Kolhapur, Govt. of Maharashtra.	Virtual	25

Scientific Agro Advisories

In response to queries of farmers, information on pomegranate was provided to the farmers through e-mail and phone. Scientific agro-advisories were sent to more than 2900 pomegranate growers through the "m-Kisan portal" during the period under report.

Transfer of Technology

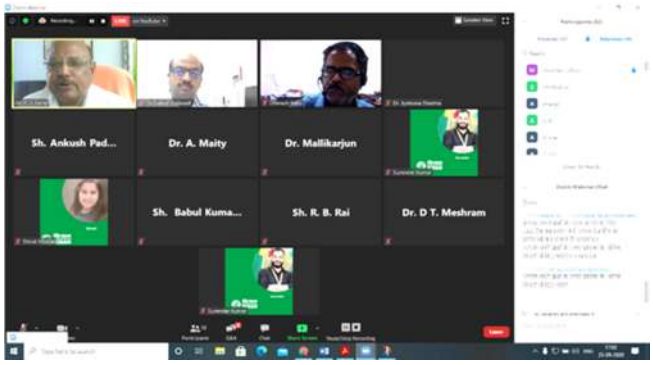
ICAR-NRCP, Solapur organized the following trainings, workshops/ field day/ FLD, technology transfer agreement for entrepreneurs and MoU for students. In addition, ICAR-NRCP actively participated in several exhibitions besides facilitating the visit of farmers/ stakeholders to the Institute to provide information on pomegranate.

SN	Technology transferred	Beneficiary	Date of Signing MoU	Revenue in Rs.
1.	Propagation of Pomegranate var. Solapur Lal through air layering / hardwood cutting	Shri Bawake Patil, M/s. Bawake Patil Nursery, Sakure, Tk.- Rahata, Dist.- Ahmednagar	07.08. 2020	Rs.90,000+ GST@18%= Rs.1,06,200
2.	Propagation of Pomegranate var. Solapur Lal through air layering / hardwood cutting	Shri. Sikandar K Jadhav, M/s. Smart Crop Nursery, Tk. & Dist.- Aurangabad	10.11. 2020	Rs.90,000+ GST@18%= Rs.1,06,200
3.	Two step Hardwood cutting protocol of pomegranate including biohardening	Bawake Patil Nursery, A/P Sakori, Tal- Rahata, Dist: Ahmednagar,	07.08. 2020	Rs. 20000 + GST@ 18%

Trainings conducted by ICAR-NRCP, Solapur

The training program has been conducted to mark the 16th Foundation day of ICAR –NRCP, Solapur.

Name of the Training	Duration	Date	Venue	No of Beneficiaries
National Webinar on Scenario of Pomegranate Cultivation in India	3 days	24-26th Sept. 2020	ICAR – NRCP, Solapur (Online)	150



National Webinar on Scenario of Pomegranate Cultivation in India on 25 September., 2020

MOU'S

With Entrepreneurs

MoU between ICAR-NRCP & M/s. Bawake Patil Nursery, Sakure, TK. Rahata, Dist. Ahmednagar

MoU between ICAR-NRCP & M/s. Smart Crop Nursery (Prop: Mr. Sikkandar Jadhav), Tk.& Dist Aurangabad.

With Academic Institutes

SN	Programme	Beneficiary	Date	Revenue in Rs.
1.	M.Sc (Hort.) / Ph.D	Andhra Pradesh Horticulture University, Tadepallikudem, A.P.	07.11. 2020	-
2.	Collaborative Research on semio-chemical research	CSIR – Indian Institute of Chemical Technology, Hyderabad -500 007, Telangana	18.11. 2020	-

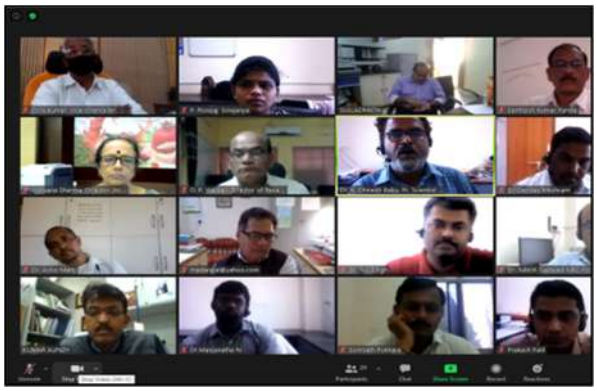
Visitors/ Dignitaries to ICAR–NRCP, Solapur

SN	Organization/ Place of Beneficiaries	Category	Date	No. of beneficiaries
1	ICAR-KVK, Chitradurga	Farmers	11.09. 2020	50
2	ICAR-KVK, Vijayapura,	Farmers	23.09. 2020	50

Institutional Activities

Research Advisory Committee

14th RAC meeting has held through Virtual Mode from November 6-7 2020 at ICRA –NRCP, Solapur under the chairmanship of Dr. N Kumar, VC, TNAU. All the RAC members were participated in the meeting. There are few recommendations from RAC committee and suggestions were emerged through the deliberations after interacting with the scientists.



14th RAC meeting has held through Virtual Mode on Nov.6 -7, 2020

Institute Research Council

The 15th IRC of ICAR–NRCP, Solapur was held in online mode during August 19-20, 2020 at ICAR–NRCP, Solapur under the guidance of Hon'ble DDG (HS) Dr. AK Singh & Chairmanship of Dr. J. Sharma, Director (Acting). The experts and scientists and IRC members have attended this meeting. The invited expert was Dr. BK Pandey, I/c ADG (HA-II). Hon'ble DDG has appreciated the achievements made by ICAR – NRCP in this short duration of its establishment and expressed his views on future plans for pomegranate research.

Govt. Initiatives

The scientific, technical and administrative staff of ICAR-National Research Centre on Pomegranate, Solapur gathered in the Director's Board Room on 27.10.2020. At the outset, Mr. VA Shinde, Coordinator of Vigilance awareness week-2020, extended welcome to staff of the Institute. Short videos related to vigilance awareness were presented. Under the leadership of Dr. J. Sharma, Director (Acting), Integrity pledge for Individual & Organization was taken by staff of ICAR-NRCP and also disseminated the anti-corruption among the farmers, staff & citizens through messages sent through WhatsApp, SMS & E-mail. The vigilance officer Dr. KD Babu has delivered a lecture on "Satark Bharat, Samriddh Bharat" & also explained activities concerned with vigilance as per Annexure-A. Dr. J. Sharma, Director (Acting) ICAR –NRCP, interacted with the staff and highlighted the importance of vigilance Awareness.

Farmers' Day

The group of pomegranate farmers from Barmer visited ICAR-NRCP. Dr. Nilesh Gaikwad, Sr. Scientist and team of scientist apprised farmers about the pomegranate pack-house operations, processing and value addition, plant protection. The farmers were keen to formulate FPO for the primary processing and value addition of pomegranate at Barmer, Rajasthan.

Farmers awareness program to formulate FPO and establishing primary processing and value addition of pomegranate at Barmer, Rajasthan on the eve of Farmer's Day

Publications

1. Kumar, A., Sharma, J., Munjal, V., Sakthivel, K., Thalor, S.K., Mondal, K.K., Chinchure, S. and Gharate, R. 2020. Polyphasic phenotypic and genetic analysis reveals clonal nature of *Xanthomonas axonopodis* pv. *punicae* causing pomegranate bacterial blight. Journal of Plant Pathology 69, 347–359, Doi: 1111/ppa.13128 7.15
2. Meshram, D.T., Babu, K.D., Nair, A.K., Panigrahi, P. and Wadne, S.S. 2020. Response of Pomegranate (*Punica granatum* L.) to deficit irrigation System under field conditions. Journal of Agrometeorolog, 22, 126-135. 6.47.
3. Singh, N.V., Parashuram, S., Sowjanya, R.P., Babu, K.D., Mundewadikar, D.M., Sangnure, V., Sharma, J. and Pal, R.K. 2020. Performance evaluation of plants raised through different propagation methods. Indian Journal of Agricultural Sciences. 90 (4), 685–88 6.25
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5. Singh, N.V., Sharma, J., Dongare, M. D., Gharate, R., Chinchure, S., Parashuram, S., Patil, P.G., Babu, K.D. Mundewadikar, D.M., Tele, A.A., Birajdar, S.B., Karwa, N.N., Tetiya, M., Salutagi, U. and Kumar, A. 2020. Exploring the biocontrol potentiality of endophytes against pomegranate bacterial blight and endophyte mediated host plant response upon external application. International Journal of Pest Management (Under Review). IF 1.907

Book Chapters

Basak, B.B., Maity, A., Biswas, D.R. 2020. Cycling of natural sources of phosphorus and potassium in organic agriculture for environmental sustainability. In: Biogeochemical Cycles: Ecological Drivers and Environmental Impact, Geophysical Monographs (Eds Dontsova K, Balogh-Brunstad Z, Le Roux G), John Wiley & Sons, Ins. pp. 285-299.

Popular articles

1. Jyotsana Sharma, Ashish Maity, Somnath Pokhare, Mallikarjun, and Dinkar Chaudhary. 2020. Dalimb Pikatil Baharnihay annadravyaye, Kid Vyavstapan. Agrowon 26th December 2020.

2. Jyotsana Sharma, Ashish Maity, Somnath Pokhare, Mallikarjun, and Dinkar Chaudhary. 2020. Dalimbavaril Roganche niyantran. Agrowon 27th October 2020.

3. Jyotsana Sharma, Ashish Maity, Somnath Pokhare, Mallikarjun, and Dinkar Chaudhary. 2020. Dalimb Baaget Annadravyacha Vaapar Kid Niyantran. Agrowon 18th August 2020.

4. Maity, A. and Sharma, J. 2020. IDIPM schedule: key to manage the bacterial blight disease in pomegranate. Biotica Research Today, 2(10), 1010-1015.

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9. निलेश गायकवाड, के. दिनेश बाबु, स्वाती सुर्यवंशी व ज्योत्सना शर्मा. (२०२१) डाळिंबाची प्रतवारी व साठवणूक शेतकरी मासिक, जानेवारी २०२१, अंक १०, २७-२९

10. शर्मा ज्योत्सना (२०२०) अनार का जीवाणु झुलसा रोग *Xanthomonas axonopodis pv punicae* :In: प्रकाश कुमार, रजेंदर सिंह तथा रशीद खान (संपादक), प्रोप मार्गदर्शिका कृषि जलवायु खंड-२ बी) प्रकाशक- सूचना अनुभाग, कृषी निदेशालय, जयपुर, राजस्थान : ६१५): pp. ५७२-५७३

11. शर्मा ज्योत्सना (२०२०) अनार का उकथा या मुरझान रोग (Pomegranate Wilt - *Ceratocystis fimbriata*) In:प्रकाश कुमार, रजेंदर सिंह तथा रशीद खान (संपादक), प्रोप मार्गदर्शिका कृषि जलवायु खंड-२बी) pp ५७४-६१४. प्रकाशक- सूचना अनुभाग, कृषी निदेशालय, जयपुर, राजस्थान

12. शर्मा ज्योत्सना (२०२०) अनार का मूल ग्रंथि रोग (रूट कनॉट - *Meloidogyne incognita*) In: प्रकाश कुमार, रजेंदर सिंह तथा रशीद खान (संपादक), प्रोप मार्गदर्शिका) कृषि जलवायु खंड-2 बी) प्रकाशक- सूचना अनुभाग, कृषी निदेशालय, जयपुर, राजस्थान : ६१५): pp ५७५

13. शर्मा ज्योत्सना (२०२०) अनार का सूर्य आतपदाहा (Sun Scald) In: प्रकाश कुमार, रजेंदर सिंह तथा रशीद खान (संपादक), प्रोप मार्गदर्शिका) कृषि जलवायु खंड-२बी) प्रकाशक- सूचना अनुभाग, कृषी निदेशालय, जयपुर, राजस्थान : ६१५): pp. ५७६

14. शर्मा ज्योत्सना (२०२०) अनार का जीवाणु झुलसा रोग *Xanthomonas axonopodis pv punicae* : In: प्रकाश कुमार, रजेंदर सिंह तथा रशीद खान (संपादक), प्रोप मार्गदर्शिका) कृषि जलवायु खंड-२ बी) प्रकाशक- सूचना अनुभाग, कृषी निदेशालय, जयपुर, राजस्थान : ६१५): pp ५७२-५७३

E – Publications

1. Jyotsana Sharma, Ashis Maity, Mallikarjun, Dinkar Chaudhary, and Vijay Lokhande 2020. Bimonthly Pomegranate Advisory in English for August- September 2020.

2. Jyotsana Sharma, Ashis Maity, Mallikarjun, Dinkar Chaudhary and Yuvraj Shinde 2020. Tingal Dalimbe Belege Salahe (Kannada). August-September 2020.
3. Jyotsana Sharma, Ashis Maity, Mallikarjun and Dinkar Chaudhary 2020. Bimonthly Pomegranate Advisory in English for October- November 2020.
4. Jyotsana Sharma, Ashis Maity, Mallikarjun and Dinkar Chaudhary, 2020. Tingal Dalimbe Belege Salahe (Kannada). October-November 2020.
5. Jyotsana Sharma, Ashis Maity, Mallikarjun, Somnath S. Pokhare and Dinkar Chaudhary 2020. Bimonthly Pomegranate Advisory in English for Dec. 2020 - Jan. 2021.

Tv Programs

Sharma Jyotsana. 2020. Management of Bacterial blight disease in Pomegranate: ETV Facebook live program on Sakal Agrowon on 03.11.2020. Interacted with 'Agrowon' Leading Agriculture Organisation in Maharashtra.

Passport Data of Plant Varieties

Dhinesh Babu, K., Singh, N.V., Chandra, R., Sharma Jyotsana, Maity, A., Jadhav, V.T., Pal, R.K., Marathe, R.A., Jalikop, S.H., Sampathkumar, P. and Murthy, B.N.S. 2020. Passport Data of new pomegranate variety NRCP H-12 (Solapur Anardana). Plant Variety Journal of India. 14 (5), 15-16.

Awards

Dr. Prakash G. Patil Best Poster Award 2020 Department of Biotechnology and Crop Improvement, College of Horticulture, Bengaluru (UHS), Karnataka, India

Joining

1. Dr. Namrata Ankhush Giri, Scientist (Food Technology) joined ICAR-NRCP, Solapur on 03.08.2020 due to transfer from ICAR-CTCRI, Thiruvananthapuram.
2. Dr. Somnath Pokhare, Scientist (Nematology) joined ICAR-NRCP, Solapur on 13.08.2020 due to transfer from ICAR-NRRI, Cuttack.
3. Dr. Manjunatha, N., Scientist (Pathology) joined ICAR-NRCP, Solapur on 17.08.2020 due to transfer from ICAR- IGFRI, Jhansi.
4. Dr. PS Shirgure, Principal Scientist (L&WME) joined ICAR-NRCP, Solapur on 12.11.2020 due to transfer from ICAR-CCRI, Nagpur

Promotions : NIL

Relieving

1. Mr. Diwakar Sawaji, Sr. Technical Assistant relieved on 07.08.2020 due to transfer from ICARNRCP to ICAR- CICR, Nagpur.
2. Dr. UR Sangle, Principal Scientist (Pathology) relieved on 17.08.2020 due to transfer from ICAR-NRCP to ICAR- IGFRI, Jhansi.
3. Dr. DT Meshram, Principal Scientist (L&WME) relieved on 11.11.2020 due to transfer from ICAR-NRCP to ICAR-CCRI, Nagpur.

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राष्ट्रीय डाळिंब संशोधन केंद्र
Solapur - 413 255, Mahasrashtra (INDIA)
सोलापूर - ४१३ २५५, महाराष्ट्र (भारत)