

## **Dr. P. Roopa Sowjanya**

**Name:** Roopa Sowjanya P.

**Designation:** Scientist

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Dr. P. Roopa Sowjanya, B.Sc.,(Agri) from University Of Agricultural Sciences, Dharwad, during 2008-2012, then obtained M.Sc. degree in Genetics and Plant Breeding from University Of Agricultural Sciences, GKVK, Bangalore, during 2012-2014. Completed Ph.D. from University Of Agricultural Sciences, GKVK, Bangalore, during 2020. Joined ICAR on January 1, 2016 in the post of Scientist (ARS). After completion of FOCARS training at NAARM, Hyderabad, joined to NRC on Pomegranate, Solapur on April 10, 2016 as Scientist.

### ***Most significant research achievements:***

Molecular characterization of germplasm lines for genetic diversity analysis

Clonal fidelity testing of *in-vitro* propagated pomegranate lines

Identified the superior genotypes of rice under aerobic conditions for yield and yield attributing traits

Identified the superior genotypes of rice by using trait specific SSR markers.

Identified high protein rich stable single cross hybrids of maize

Unraveled the genetics of protein and amino acid content in SCHs of maize

### ***Research interests:***

Development of new varieties/Hybrids in pomegranate

Developing tolerant/resistant cultivars for abiotic and biotic stresses in pomegranate

Developing new mutant variant in pomegranate and association mapping

### ***Thesis work***

“Identification of superior segregants for yield and yield attributing traits in segregating populations of rice (*Oryza sativa* L.) – **M. Sc.**

“Genetics of grain protein, yield and its attributing traits in maize (*Zea mays* L.)”- **Ph.D.**

### ***Awards/Recognition:***

- Awarded Rajiv Gandhi National Fellowship for Doctoral studies.
- Best poster award for the poster entitled “Clonal fidelity testing of micropropagated Bhagwa and Super Bhagwa plantlets by using RAPD, ISSR and SSR” in **2<sup>nd</sup> National seminar cum Farmers Fair on pomegranate for Health, growth & prosperity.**

***Elected as Executive Member of the Society for Advancement of Research on Pomegranate (SARP), Solapur***

### ***Publications:***

1. **Potlannagari Roopa Sowjanya**, P. Raghavendra, R. Venkatesh Gandhi and Shailaja Hittalmani, 2016, Identification of superior segregants through exploitation of genetic variability in F<sub>3</sub> families of rice (*Oryza sativa* L.) under aerobic cultivation, Mysore j. agric. sci., 50 (4):691-700.
2. **Potlannagari Roopa Sowjanya**, P. Raghavendra and Shailaja Hittalmani, 2016, Genetic analysis and validation of trait specific SSR markers for yield and its attributing traits in F<sub>3</sub> family of IM 90/ IR 64 cross in rice (*Oryza sativa* L.) under aerobic condition. Ecoscan, The (supplement on rice) 10(1&2):185-190.
3. **Potlannagari Roopa Sowjanya**, Raghavendra P and Shailaja Hittalmani, 2017, Trait association studies to determine selection indices in two F<sub>3</sub> segregating populations of rice (*Oryza sativa* L.) under aerobic condition. *Oryza* 54 (3): 276-281.
4. **Roopa Sowjanya, P.**, Gangappa, E. and Ramesh, S., 2019, Combining ability for yield and its component traits in maize (*Zea mays* L.), *J. Expt. Biol. Agric. Sci.*, 7(4):376 – 381
5. **Roopa Sowjanya, P.**, Gangappa, E. and Ramesh, S., 2019, General and specific combining ability of single cross hybrids in maize (*Zea mays* L.), *Int. J. Curr. Microbiol.App.Sci.*, 8(10): 313-323.
6. Singh, N.V, Shilpa, P., **Roopasowjanya 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 in pomegranate (*Punica granatum*). *Indian Journal of Agricultural Sciences*, 90(4): 685-688.
7. Singh, N.V., Shilpa, P., Sahrma, J., **Roopasowjanya, P.**, Babu, K.D., Pal, R.K. and Patil, P.G. *et.al.*, 2020. Comparative transcriptome profiling of pomegranate genotypes having resistance and susceptible reaction to *Xanthomonas axonopodis* pv. *Punicae.*. *Saudi Journal of Biological Sciences*.
8. Prakash G. Patil, N. V. Singh, Shilpa Parashuram, Abhishek Bohra, **Roopa Sowjanya**, Nilesh Gaikwad, Dhananjay M. Mundewadikar, et al. Genome-wide characterization and development of simple sequence repeat markers for genetic studies in pomegranate (*Punica granatum* L.), Tree Structure and function, 28 March 2020

9. Shilpa. P., Singh, N.V., Sharma, J., **Roopasowjanya, P.**, Patil, P.G., Jadhav, G.V., Sangnure, V.R., Mundhewadikar, D. M., Baghel, D. S., Harish, K., Tripathi, A., Kumar, B., Murthy, B.N.S., and Pal, R.K., 2019. Genome wide association analysis (GWAS) and discovery of novel SNP markers for bacterial blight resistance in pomegranate. 8<sup>th</sup> Indian Horticulture Congress-2019, 17-21 Jan, 2019, Raipur, India.
10. Shilpa Parashuram, Satish N S, NV Singh, Parashuram Patroti, **P. Roopa Sowjanya**, Prakash B Patil, Vipul Sangnure, Daithankur, Manglaram and R.K.Pal, 2018, In silico Development of EST–SSR markers in Pomegranate (*Punica granatum* L.). in National seminar Recent Trends in Plant Sciences and Agricultural Research.
11. Mahesh Biradar, E. Gangappa, S. Ramesh, **P. Roopa Sowjanya**, N. C. Sunitha, Gazala Parveen, H. H. Sowmya and K. Suma Association Between GCA and Per Se Performance of Parents and Hybrids for Grain Yield, its Attributing Traits and Late Wilt Disease (*Harpophora maydis*) Resistance in Maize (*Zea mays* L.), *Int.J.Curr.Microbiol.App.Sci* (2020) 9(3): 2560-2570

***Other Publications:***

**Popular articles: 3, Abstracts in Seminar/Symposium: 10**