
Phule Anurag - A New Blast Resistant Bread Wheat Variety for Farmers of Maharashtra and Karnataka

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ABSTRACT

Agricultural Research Station, Niphad recently developed a new bread wheat variety Phule Anurag (NIAW 4028) which is resistant to wheat blast as well as both stem and leaf rusts. The variety was identified and recommended by Varietal Identification Committee Meeting in 62nd AGM of All India Coordinated Research Project on Wheat & Barley held at MPUAT, Udaipur during Aug. 26, 2023 to Sept. 01, 2023. It has been released and notified by Central Sub Committee on Crop Standards, India vide Gazette Notification No. S.O.1560 (E), dated 26th of March, 2024 for cultivation in Peninsular Zone under restricted irrigation condition.

INTRODUCTION

Wheat is one of the most important cereal crops cultivated in Maharashtra and Karnataka, playing a vital role in ensuring food security and supporting rural livelihoods. In Maharashtra, wheat is primarily grown during the rabi season under irrigated conditions as well as restricted irrigation conditions, with regions like Pune, Solapur, and Ahmednagar being key production areas. Similarly, in Karnataka, districts such as Vijayapura, Dharwad, and Gadag contribute significantly to wheat cultivation. The crop thrives in the moderate winter climate of these states, with adequate irrigation being a crucial factor for achieving good yields. Research and introduction of improved varieties have further enhanced wheat production in these regions, offering better disease resistance, adaptability, and higher yields to meet the growing demand for quality grains.



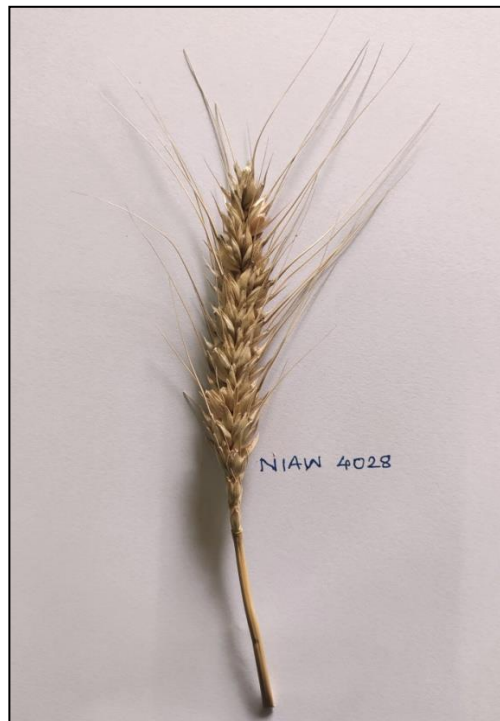
Field View of bread wheat variety Phule Anurag (NIAW 4028)

The variety was tested in AICRP trials during 2020-21, 2021-22 and 2022-23. It recorded higher yield than standard checks of the region. It found resistant to emerging wheat blast when tested at Jashore, Bangladesh, during 2020-21 and 2021-22. It also found resistant to leaf and stem rust. Developed by Agricultural Research Station, MPKV, Niphad; this high-yielding variety, is set to revolutionize wheat cultivation in India. It is designed to cater to the needs of farmers of Peninsular India especially who cultivate bread wheat under restricted irrigation condition.

SALIENT FEATURES OF BREAD WHEAT VARIETY PHULE ANURAG (NIAW 4028)

- Mean yield: 33.43 q/h
- Yield Potential: 46.8 q/ha
- Resistant to Brown rust (ACI- 3.2), Black rust (ACI- 2.6)
- Resistance to emerging blast disease among all the genotype tested in AVT last year testing.
- Resistant to Karnal Bunt (11.4 %), Powdery Mildew (4.5) and Flag Smut (2.7 %)

- Resistance to shoot fly (10.75 %) and wheat aphids (4.05) under controlled conditions
- Irrigation responsive: increased yield of 12.43 % and 55.39 % with one and two irrigations respectively over no irrigation (25.51 q/h)
- 1000 grain weight: 44 g
- Ear heads/m²: 345
- Protein content: 12.43 %
- Fe (ppm) content: 39.7
- Zn (ppm) content: 37.0



Earhead of Phule Anurag (NIAW 4028)

CONCLUSION

Due to its exceptional grain quality, resistance to blast and both stem and leaf rust, and adaptability to diverse agro-climatic conditions, Phule Anurag promises to enhance productivity while ensuring sustainable farming practices. This variety is a result of meticulous research aimed at improving resilience against biotic and abiotic stresses. With its potential to boost incomes and food security, Phule Anurag is a significant step forward in agricultural innovation.

REFERENCES

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