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NIDW-1149 - A New durum Wheat Variety for Peninsular Zone under Restricted Irrigation Condition

NIDW 1149 is a durum wheat variety developed by Agricultural Research Station, MPKV; Niphad (MS) having IC No IC 635346 has pedigree NIDW 295 (Godavari) X NIDW 15 (Panchvati). The variety was identified and recommended by Varietal Identification Committee Meeting in 59th AGM of All India Coordinated Research Project on Wheat & Barley held on 24th August, 2020. It has been released and notified by Central Sub Committee on Crop Standards, India for cultivation in Peninsular Zone (Maharashtra and Karnataka states) under restricted irrigation condition vide Gazette Notification No. SO 500 (E) dated 29th January 2021.

INTRODUCTION

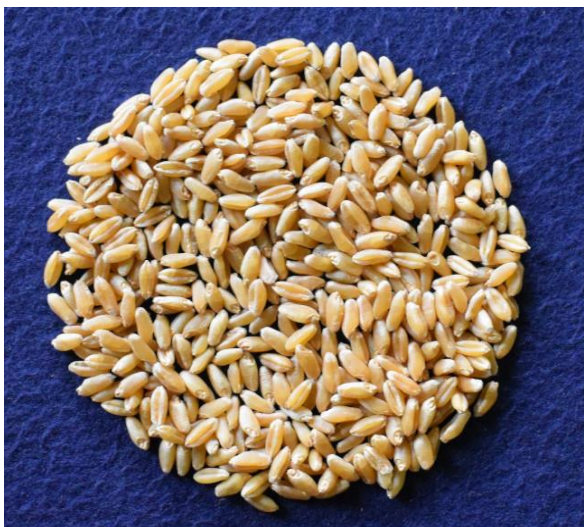
Wheat is one of the most important cereals worldwide and it is one of the most durable and dependable crops in India after rice and maize. It can be grown under different climatic conditions. It plays a major role in stabilizing the food grain production and also to boost the economy in the India. Durum wheat (*Triticum durum* L.) is an economically important crop grown worldwide including India. It is being cultivated in 10 to 11% of world area and accounts about 8% of the total wheat production. It is largely used to make pasta, macaroni, puddings, bread (flat and leavened), and other traditional food items like *rava*, *dalia*, *sevaya*, *upma*, *suji* etc. As compared to rice and bread wheat, nutrient value of Durum wheat is more, because it contains protein, iron, copper and zinc in higher quantity comparatively. In addition, it contains vitamin B complex in ample amounts. It also

contains folic acid, calcium, vitamin E and antioxidants in good amounts as compared to bread wheat.

On the basis of average of three years data (2017-18, 2018-19 & 2019-20) from AICRP experiment of wheat under restricted irrigation condition, NIDW 1149 recorded higher grain yield (29.73 q/ha) than the check varieties viz., HI 8627 (28.20 q/ha), AKDW 2997-16 (26.20 q/ha), UAS 466 (27.60 q/ha) and UAS 446 (25.15 q/ha) in Peninsular Zone. Its yield potential (36.8 q/ha) was the highest among all the check varieties in Peninsular Zone under restricted irrigation condition. The variety NIDW 1149 recorded the average plant height of 73.7 cm. The grains of the variety are amber colored, hard, elliptical in shape with average thousand grain weight of 47.3 g. This variety is responsive to irrigation with increased yield of 15.90 % and 24.45

% when given one and two irrigations respectively over no irrigation. NIDW 1149 is resistant to Brown rust (ACI- 1.9), Black rust (ACI- 4.1) and Yellow rust (ACI- 3.9) NIDW 1149 exhibited better APR response to stem rust races 117-6 (10 MR to 10S) and 40A (0 to 5MS). The variety also found Resistant to Karnal Bunt (2.15 %), Powdery Mildew (4.0), Flag Smut (0.5 %) and Loose Smut (3.3 %). The variety NIDW 1149 has shown better resistance to shoot fly and root aphids under controlled conditions. The variety is having good quality parameters like Protein content 11.37 %, Fe 38.4 ppm, Zn 37.6 ppm, Yellow pigment 3.99 % etc.

Considering all above features, the new *durum* wheat variety NIDW 1149 is adaptable for restricted irrigation conditions of Peninsular Zone (Maharashtra & Karnataka).



CONCLUSION

The *durum* wheat variety NIDW 1149 will be accepted and cultivated by the farmers of Maharashtra and Karnataka States under restricted irrigation condition as it has good yield potential and it is also good for making *pasta*, *macaroni*, *upma*, *dalia* etc.

REFERENCES

Gazette Notification No SO 500 (E) dated 29th January 2021.

Progress Reports of AICRP on Wheat and Barley 2017-18, 2018-19 & 2019-20.

Proceedings of Varietal Identification Committee of Wheat & Barley (59th AGM dated 24th August 2020).