

GN-5: A new high yielding white grain finger millet variety

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SUMMARY

A white grain high yielding culture WVN-20 was developed at Hill Millet Research Station, Navsari Agricultural University, Waghai (Dangs) and released as Gujarat Nagli-5 (GN-5) for South Gujarat during 2009. It is a pure line selection from the germplasm accession. This culture yields on an average 3065 kg/ha grain yield. The culture WVN-20 registered 24.89 and 18.92 per cent increased grain yield over the standard check varieties GN-3 and GN-4 in station trials, respectively. The culture matures in 120-130 days. The high yield in this culture was attributed to higher number of tillers, high fingers/ear head and bold seed size. The nutritional quality of culture WVN-20 in terms of protein, calcium, magnesium and iron content was also found better than variety GN-3 and GN-4. The grain quality especially colour of grain suits for consumer acceptance and value addition.

Key Words : Finger millet, Grain yield, Nutritional quality

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Finger millet (*Eleusine corocana* Gaertn.) is one of the important small millet crop grown for food grain and fodder, especially in tribal predominant areas. The crop is hardy and well suited to upland farming ecosystems, because of its early maturity and quick growing nature. In India among millets, ragi stands third only to sorghum and pearl millet. It is commonly known as *nagli* in the tribal belt of Gujarat and occupies an area of about 19,000 ha with an annual production of 16,000 tonnes (Annonymus, 2011). In Gujarat, it is mainly cultivated as rainfed crop in *Kharif* in the less fertile hilly soils

of Dangs, Valsad, Navsari, Panchmahal and dahod districts.

The crop is performing well under diverse conditions of soil, climate and moisture. Finger millet is highly nutritious as its grains contain 65-75 per cent carbohydrates, 5-8 per cent protein, 15-20 per cent dietary fiber and 2.5-3.5 per cent minerals (Chetan and Malleshi, 2007). Excellent grain storage quality (Iyengar *et al.*, 1945) attributable to polyphenol content (Chetan and Malleshi, 2007) makes finger millet an ideal cereal for famine reserves. The traditional method of consumption of ragi by rural communities is in the form of chapati/roti. The finger millet grains offer many opportunities for diversified utilization and in adding value.

The colour of ragi grains may vary from white through orange red, deep brown and purple to almost black. Brown is the predominant grain colour. Among brown and white grain types, white grains are preferred because of high protein, low fiber, low tannin and consumer acceptability (Sonad *et al.*, 2008). The dark colour of finger millet is acting as deterrent for its wide spread acceptability, especially by the non-traditional /urban millet consumers. To provide these non-traditional millet consumers with readily acceptable millet products, efforts are being done to improve the grain quality in terms of colour.

Hill Millet Research Station, Navsari Agricultural University, Waghai (Dangs) is working on improvement of

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