



Kalanamak Rice

Kalanamak is one of the finest quality scented rices of India. It has been grown widely in Tarai belt of Uttar Pradesh, in the districts of Siddharthanagar, Sant Kabir Nagar, Maharajganj, Basti, Gonda, and Gorakhpur. High quality Kalanamak is still in cultivation in Birdpur, Nichloul and surroundings of Siddharth Nagar district.

Kalanamak is so named because its husk is black but kernel is white (*kala* = black). It is famous for taste, palatability, and aroma. Kalanamak surpasses Basmati rice, considered to be finest quality rice in international trade, in all quality traits except grain length. Cooked rice is fluffy, soft, non-sticky, sweet, and easily digestible with relatively longer shelf-life. This short grain aromatic non basmati rice has greater head rice recovery (> 65% c.f. basmati 40 to 45%) after polishing and better elongation after cooking (2.2 to 2.7 c.f. basmati it is 1.8 to 2.0) which is one of the major determinants of the rice in the international market.



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Kalanamak is cultivated normally under rainfed lowland condition as it matures in 145-150 days. “*Kalam*” is a traditional method of establishment of *Kalanamak*, which is probably as old as *Kalanamak* itself. In *Kalam*, transplanting is done twice. First transplanting of 30 to 35 day old seedlings is done in a bunch of 5 to 6 seedlings. After 25 to 30 days, these seedlings are uprooted, separated from each other, and transplanted again at a normal distance. In the past, this method was widely followed by farmers for the cultivation of *Kalanamak*. However, with decline in area of *Kalanamak*, this method has virtually gone out of practice.

Kalanamak has shown salt tolerance at high pH of 9.0-9.5. It is moderately resistant to notorious diseases namely panicle blast, stem rot and brown spot but susceptible to stem borer. *Kalanamak* can be easily cultivated under low input (N:P:K 40:30:30 kg/ha) condition. It is well suited to organic farming.

During last decade systematic efforts have been made to survey the area, collect the variable variants and conserve them. Study indicated that area under *Kalanamak* has shrunk to a meager and if proper care is not taken it may disappear from its original place.

Efforts have been made to improve the original *Kalanamak* through reducing maturity duration plant height, incorporating better tillering ability and relatively high degree of resistance to major diseases and pests. Efforts lead to the development and release of KN-3 and *Narendra Kalanamak*. Besides attempts have also been made to estimate and quantify the principal aromatic compounds in the indigenous aromatic rices specially 2-acetyl-1- pyrroline (2-AP) and simultaneously four other flavor compounds like vanillin, benzyl alcohol, hexanol and 2-vinyl-4-methoxy-phenol in collaboration with other national institutions. Influence of environment on quality traits is one of the major factors which has restricted its cultivation in localized area and adaptation.

The area under cultivation of *kalanamak* has shrunk primarily due to: (i) poor yield, (ii) tall stature causing lodging, (iii) long duration, (iv) decline in grain quality, particularly loss of aroma and taste, (v) panicle blast epidemics (vi) non-availability of quality seeds and research support.

Since *Kalanamak* is an ancient cultivar, farmers have been using their own seed for cultivation since hundreds of years. There was never any organized seed purification, production, and distribution system for this cultivar. This variability has resulted in decline in both productivity and quality but at the same time it has probably helped in survival of the cultivar in its native area of cultivation.

Cultivated rice, *Oryza* spp., represents the world’s most important staple food crop, feeding more than half of the human population. The variability of the varieties that exists in this crop is unrivalled. Vavilov assigned rice to the Indian center of origin. Archeological findings of rice date back to 2000 BC.

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East Wing, III Floor, A-Block, PICUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow-226 010, U.P., INDIA
Phone : +91 522 4006746, +91 2306491, E-mail: upstatebiodiversityboard@gmail.com
Website: www.upsbdb.org