Exhibited consistently higher grain yield (up to 3.5tha-1), higher grain iron up to 45 ppm and zinc up to 32 ppm compared to the baseline of 30 ppm iron and 20 ppm zinc in current varieties of sorghum.

ICRISAT assessed over 3,500 germplasm lines, improved breeding lines and hybrid parents of sorghum for their grain iron and zinc contents and identified promising lines for use in breeding programs. One of the selected lines from this data-driven breeding effort was sorghum restorer line ICSR 14001 which showed agronomic desirability, higher nutrients content and exhibited agronomic desirability and better grain mold resistance, besides having high protein content of 12% and a low phytate content (4.14%).

Although this variety was released as a rainy season variety (Kharif), it can also be grown in the post-rainy (Rabi) and summer seasons where the yield levels are higher (>5.0 t/ha) with appropriate irrigation. When grown in summer season, it can tolerate higher temperatures (41°C) at flowering and seed setting, although its flowering may be delayed by up to 80 days.

To improve To improve nutrition in India Since 2018

MICRONUTRIENT RICH SORGHUM CULTIVAR: ICSR 14001 (PARBHANI SHAKTI)

Sorghum is an important food crop for over 500,000 people in Semi-Arid regions of sub-Saharan Africa and South Asia, that harbor the largest number of malnourished people globally. Therefore, any efforts to increase the grain Fe and Zn contents in sorghum would significantly improve its nutritional value and complement well with the ongoing efforts to address micronutrient malnutrition. The cultivar “Parbhani Shakti” was a selection from grain sorghum Caudatum landrace accession (IS 26962) originating from India. The landrace (IS 26962) has thick panicles, cream-colored small sized grains (100 seed weight less than 3 g) with slight glume coverage on the grains. This selected line has higher yield, nutrients content and exhibited agronomic desirability and better grain mold resistance, besides having high protein content of 12% and a low phytate content (4.14%).

"...Loose and branched panicle with greater number of seeds, white-colored grains of medium to large size (100 seed weight more than 3 g) without any glume coverage...”

This sorghum cultivar has been taken up by users as a Stage 4 and a Maturity level 3 innovation, i.e. policy and/or practice changes influenced by these new methods have led to adoption or impacts at scale or beyond the direct CGIAR sphere of influence. Among others, this is evidenced by the fact that bio-fortified sorghum ‘Parbhani Shakti’ developed in India is performing well in multi-location trials and National Variety Testing trials in Sudan and is headed towards its release.

Exhibited consistently higher grain yield (up to 3.5tha-1), higher grain iron up to 45 ppm and and zinc up to 32 ppm compared to the baseline of 30 ppm iron and 20 ppm zinc in current varieties of sorghum.

Considering large demand for its seed, 50 and 40 tons of seeds were produced during 2018 and 2019 respectively, and supplied to farmers. Farmers were also trained in its seed production and encouraged to share the seeds.

http://gldc.cgiar.org