New Protein Study Reveals Power of Millet-Legume Blends for Enhancing Human Health

Two billion people around the world are suffering from protein and micronutrient deficiencies. The results of a new study by the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) may be able to significantly reduce those deficiencies, through a combination of millets and legumes that creates a highly digestible, complete protein that is packed with nutrients.

Legumes are one of the most popular sources of protein, but they are missing one essential amino acid. Millet, a nutrient packed crop, however, has that missing amino acid. Combined, the two create a powerful nutri-basket. With high levels of complete protein, high protein digestibility, and high levels of micronutrients, small and large food companies alike may use this combination to develop products that can significantly reduce malnutrition, the study reports.

"No one food is going to satisfy all of our needs," Executive Director of Smart Food Initiative at ICRISAT, Joanna Kane-Potaka, tells Food Tank. "We need to look deeper than just the amount of protein we are eating but [also at] the quality of the protein...very few consumers [will] know this and companies selling products rarely give this information."

The study was conducted as part of the Smart Food initiative and led by Dr. S. Anitha, nutritionist at the International Crop Research Institute for Semi-Arid Tropics. Researchers tested multiple combinations of different millet and legume varieties, finding maximum benefits at the three to one, millet to legume ratio.

Development of plant-based protein is relevant worldwide: in India, home to a large number of vegetarians, in Sub-Saharan Africa and other developing countries, where plant-based protein is often all that is affordable, and in the Global North, where plant-based protein is gaining popularity among vegetarians and vegans. ICRISAT hopes this discovery will garner support across the value chain to make millet a staple.

Labeling millet as a staple will help increase its respect and recognized importance in the mainstream market, says Kane-Potaka. Currently, few consumers are aware about millets. Its flexibility and high nutritional value has caught the eye of some scientists and processors, who hail it as the next quinoa. But if qualified as a staple it has the potential to reach the masses, rather than exist in a niche high-end market like quinoa, Kane-Potaka tells Food Tank.

In addition to nutritional value, the crops provide other benefits to the land and the farmer. When used in alternative cropping, legumes can increase yields of other crops, enriching the soil by naturally adding nitrogen. Drought resistant and heat tolerant, millets are climate smart, making them reliable crops for farmers. “They really are a Smart Food – good for you, the planet, and the farmer,” says Kane-Potaka. Read more..