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To study the nutritional use of minor millet food in Madhya Pradesh

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ABSTRACT
Millets are regarded as a significant grain, however, they are the least exploited. Millet grain is abundant in nutrients and health-beneficial phenolic compounds, making it suitable as food and feed. The diverse content of nutrients and phenolic compounds present in finger and pearl millet are good indicators that the variety of millet available is important when selecting it for use as food. The phenolic properties found in millets compromise phenolic acids, flavonoids, and tannins, which are beneficial to human health. Moreover, finger millet has an exception ally unique, more abundant, and diverse phenolic profile compared to pearl millet. Research has shown that millet phenolic properties have high antioxidant activity. The presence of phyto chemicals in millet grains has positive effect on human health by lowering the cholesterol and phytates in the body. The frantic demands on maize and its uses in multiple industries have merited the search for alternative grains, to ease the pressure. Substitution of maize with pearl and finger millets in the diets of different animals resulted in positive impact on performance. Including these grains in the diet may improve health and decrease the risks of diseases. Pearl millet of 50% or more can be used in broiler diets without adversely affecting broiler performance or egg production. Of late, millet grain has been incorporated in other foods and used to make traditional beverages. Thus, the core aim of this review is to provide insight and comprehension about the nutritional and phenolic status of millets and their impact on human and livestock.

KEYWORDS
Health, Foods, Finger Millet, Nutritional Composition

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A millet crop includes grasses like finger millet (*Eleusine coracana* L. Gaertn), pearl millet (*Pennisetum glaucm* (L.) R.Br), foxtail millet (*Setaria italica* (L.) P. Beauvois), kodo millet (*Paspalum scorbiculatum* L.), bahiagrass (*Paspalum notatum* Flugge), little millet (*Panicum sumatrense* Roth ex Roem. and Schult.), proso millet (*Panicum miliaceum* L.), barnyard millet (*Echinochola crusgalli* (L.) P. Beauv), guinea grass (*Panicum maximum* Jacq), elephant grass (*Pennisetum purpurium* Schumach.) that belong to the family Poaceae of the monocotyledon group. India is considered as pivot for these minor crops. The world total production of millet grains in year 2021-22 was 11,850 metric tons.

Finger millet commonly known as ragi and mandua in India is one of the minor cereals a native of Ethiopia, but grown extensively in various regions of India. constitutes as a staple food that supply a major portion of calories and protein to large segments of the population in these countries especially for people of low income groups. In India, Karnataka is the leading producer of finger millet accounting to 58% of its global production, yet only a few Indians are aware about its health benefits and nutritional value. The production area of finger millet in India stands sixth after wheat, rice, maize, sorghum and bajra.

\Millets are important but underutilized crops in tropical and semiarid regions of the world due to their greater resistance to pests and diseases, good adaption to a wide range of environment and their good yield of production, can withstand significant levels of salinity, short growing season, resistant to water logging, drought tolerant, requires little inputs during growth and with increasing world population and decreasing water supplies represents important crops for future human use. The drought tolerance of finger millet may be attributed to an efficient antioxidant potential and increased signal perception.

Being as hardy crop it is relatively easy to grow finger millet under stressful regimes, without hampering the net productivity. There is vast potential to process millet grains into value-added foods and beverages in developing countries. Furthermore, millets, as they do not contain gluten and therefore it is advisable for stomach (abdominal) patients. In current review attempt has been made to collect the available information from existing literature either online or offline related the nutraceutical importance and health benefiting properties of finger millet and trying to present the collected data in a easily-documented pattern.

Methodology

Review was conducted based on the methodology reported earlier with slight modification. The current topic was selected based on a literature survey to identify the gap between the available literature resources pertaining to the effect of processing treatment on specific nutrient components of millet with respect to the Indian scenario. The objective of the review was to evaluate the millet processing treatments in order to identify the appropriate processing treatment for maximum retention of nutrients. The articles exclusive to dehulling, fermenting, germination, parboiling, cooking, puffing, popping, malting, and extrusion millet processing were included. The literature review was carried out using databases such as Pub Med and Google Scholar as search engines.

The common search terms used were millets processing, millet nutrition, dehulling, nutri-cereals processing, value addition to millets, fermenting, germination, parboiling, cooking, puffing, popping, malting, extrusion of millets, etc. Comprehensive Revival of Millets cultivation' by Tribals and rainfed areas of Madhya Pradesh. The program intends to develop tribal, and rain fed areas into Millet-Hubs that can potentially supply millets to meet increasing demand and find its place in the grain economy. This project aims to increase productivity, household consumption, value addition by making ragi biscuits, idli and dosa, marketing support, setting up of processing centers and establishing seed production centers. A pilot inclusion of Millet recipe for Pregnant and Lactating Women. A campaign has been launched to encourage tribal people to improve food and nutritional security.

Promotion of Millet based food items in Madhya Pradesh: Keeping in view of the importance of iron, protein and energy rich nutrition to pregnant women, lactating mothers and children below 6 years, certain changes were suggested to maintain uniformity and greater coverage of beneficiaries with recommended nutrition standards, focusing mainly addition of millet food items in Supplementary Nutrition Programme (SNP) like YSR Sampoorna Poshana Yojana (YSR Sampoorna Yojana Plus for (Tribal Sub Plans). Millets "The Future Super Food for India" Introduction of Nutritious Millets into Anganwadi Centers. These festivals were also used as a medium to spread awareness about benefits of Millets and encourage communities to make them a part of their diet. At these festivals, Children and mothers were served dishes cooked with millets and the feedback was collected from members of the community, mothers, people representatives, anganwadi workers, helpers, and kids.

Conclusion

The way and speed in which millet cultivation is on decline within in no time we might lose our natural traditional crop millets forever. Tribal communities use to practice millet farming because of its adaptability to this environment. Therefore millet farming needs promotion in these regions.

Improved practices of millet cultivation will lead to nutrition and food security for tribal communities. Now a day natural and organic food is in demand and most preferred by higher classes. They purchase many products which are named as fiber rich with millet or multigrain are usually falsely promoted by substitutes. This craze for natural food may help in the cause to increasing millet production. Making millets famous will save millets and tribal food as well as our natural and traditional way to conserve wild crop plants. In conclusion I would propose conservation of millets under title "Making millets famous". Need for millet conservation and cultivation is immensely under requirement as nontraditional and conventional food crops are in high demand. Cultivation techniques of these crops require large amount of synthetic chemicals as fertilizer and pesticides which, as we know are hazardous to nature and life on earth.

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Millet Network of India, Deccan Development Society FIAN, India Future of Food and Farming.