Good Health & Well-Being and Millet

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What is Millet ?

Millets are a group of highly variable small-seeded grasses, widely grown around the world as cereal crops or grains for human food and as fodder. In India, millets have been mentioned in some of the oldest Yajurveda texts, identifying foxtail millet (priyangava), Barnyard millet (aanava) and black finger millet (shyaamaka), thus indicating that millet consumption was very common, pre-dating to the Indian Bronze Age (4,500BC). Millets however lack the nutrients critically important for a person’s body.

Nutritional Facts Per 100 Grams of Millet

378	4.2 g	5 mg	73 g	28%
Calories	Total Fat	Sodium	Total Carbohydrate	Magnesium

195 mg	11 g	16%	11 g
Potassium	Protein	Iron	Vitamin B-6

Problems in Millet Production

1.Processing Efficiency

Processing converts the inedible grain into edible form and thereby enhancing its quality. Longer shelf life, aesthetics of food and flavour and ease of cooking is what necessitates processing.
However some millets require multiple processing for optimization of grain recovery and optimization of polishing to retain their nutrition value

2.Decentralized Processing

Processing of millets face several hurdles owing to variation in size of various millet types and low shelf life of the processed millets. The grains vary in terms of shape, nature of grain surface, hardness, husk-grain bonding etc. Furthermore, there are variations within the same small millet crop due to variation in varieties, cultivation practices, and microclimate across production regions

3.Shelf Life Augmentation

Millets are extremely nutritious and are proven to have health benefits. However, millets have poor shelf life once processed due to its intrinsic enzyme activity (lipase activity, lipid oxidation etc.) that causes rapid development of rancidity and bitterness. Millet products are also prone to moisture and water activity. Quality assurance thus greatly depends on different pre-treatments and / or storage conditions.

4.Marketing and Market Linkages

Millet supply chain suffers from inconsistent supply and demand that prevents its commercial viability. While the lack of access to HYV seeds has led to low crop productivity, the lack of public awareness about nutritional benefits of millets has led to limited adoption of millets as a ready to cook cereal. In addition, limited distribution and lack of market knowledge have resulted in sub-optimal reach, lower price realization and wastage.

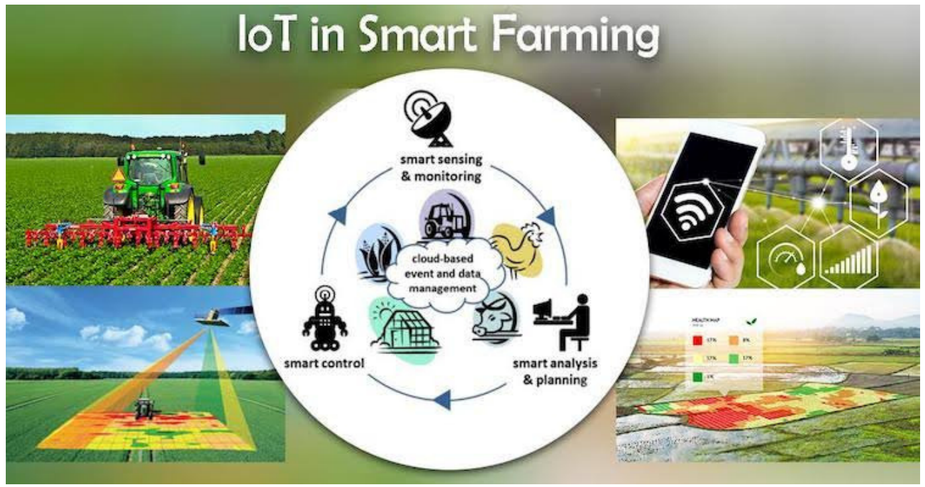
Health Benefits of Millet

How technology can be used for good health using Millet?

Technology can play a significant role in promoting good health and well-being using millets. Millets are a group of small-seeded grasses that have gained attention in recent years due to their nutritional value and potential health benefits. Here are several ways technology can be leveraged to promote good health using millets:

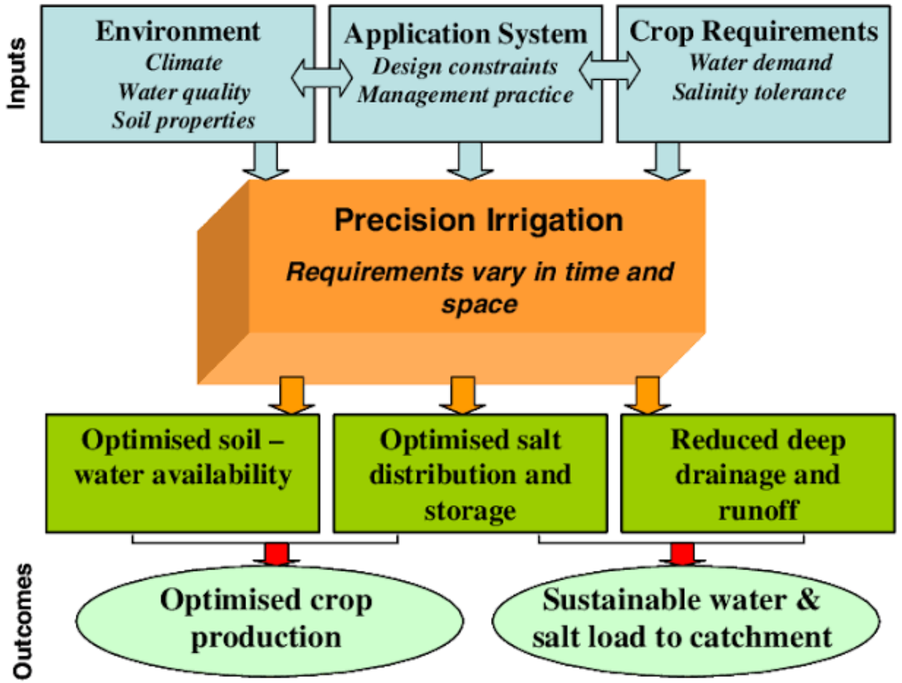
Smart Farming- using IoT

Technology such as Internet of Things (IoT), sensors, and drones can be used in millet farming to monitor soil quality, weather conditions, and crop health. This information can help farmers optimize irrigation, reduce pesticide use, and improve yield, ensuring the availability of high-quality millets.



Precision Irrigation

Through the use of IoT sensors, farmers can monitor the moisture levels in the soil. This data helps them determine the exact amount of water needed for the millet crop, optimizing water usage and preventing over- or under-irrigation. Precision irrigation not only conserves water but also ensures that the millet plants receive adequate moisture for healthy growth.



Farm Automation

Automation technologies, such as robotic systems or autonomous vehicles, can be employed in millet farming operations. These technologies can perform tasks like sowing seeds, applying fertilizers, and harvesting crops with precision and efficiency. By automating repetitive and labor-intensive tasks, farmers can reduce their workload and focus on higher-value activities.

Thank You