

Let's Bring A Millet Revolution In India

Millets are one of the most versatile, nutritious, and climate-proof food grains on earth. They have the potential to be the future staples for the world. But, currently they are popular only in some regions of India. In this case study competition, PRAKRITI-2022 challenges you to leverage your problem solving skills and develop a 5-year roadmap to bring a Millet Revolution in India.



INTRODUCTION

Millet is a common term to categorize small-seeded grasses that are often termed nutri-cereals or dryland-cereals. They are coarse grains that have been grown for ages, across different cultures including Asia, Africa, Europe, and America. In fact, they were the first plants to be domesticated by humans.

Some well known varieties of millets are bajra (pearl millet), jowar (sorghum), ragi (finger millet), kodo (kodo millet), kutki (little millet), kakun (foxtail millet), sanwa (barnyard millet), cheena (proso millet), kuttu (buckwheat) and chaulai (amaranth).

Despite their vast diversity, millets are not very popular in most parts of the world. Rice and wheat are still the staple food grains for the whole world and millets have a small pie when it comes to global food grain consumption.

However, both rice and wheat demand a lot of water and other chemical inputs for their growth. They have high carbon footprints and their production is often linked with high use of chemical fertilizers and pesticides. Thus, production of rice and wheat may not be sustainable in the long run.

Millets on the other hand grow easily in dry climate and have shorter growing season (70-100 days, as against 120-150 days for rice/wheat). They are hardy, tolerant crops that are photo-insensitive & resilient to climate change. They have a low carbon footprint, require less water to grow, can withstand high temperatures and grow on poor soils with little or no external inputs. Thus, they can be a sustainable alternative to rice and wheat, and serve as a new staple food for the world. They can help in providing food security to large population in the coming years.



When it comes to nutrition, millets are found to be way superior than rice and wheat. Most millets contain higher calcium, iron and fibers than other cereals. They contain Lignans, an essential phytonutrient which helps to reduce the risk of heart diseases. They have higher insoluble fibre which aids better digestion, and are known for their anti-cancer properties.

Millets have more protein than rice and are rich in vitamins A and B, iron, phosphorus, magnesium and manganese. They are gluten free and have low glycemic index, therefore ideal for diabetic patients. Thus, millets can be used effectively to treat malnutrition in poor and urban disorders like obesity among the rich.

Problem Statement

Despite their huge potential to be "Super-Grains" for future India, millets are currently unpopular both among the farmers and the consumers. The annual domestic consumption of millets for the year 2021 was only 11.5 Million Tonnes as compared to 104 million tonnes of wheat and 103 million tonnes of rice. In addition, the area under millet cultivation has declined from 36.90 million hectares in 1965-66 to 22.18 million hectares 2016-17 crop year.

The supply chain is not efficient and farmers lack the right knowledge and infrastructure for production, value-addition, and marketing of millets.

To improve the scenario, you need answer the following questions and help to bring a "Millet Revolution in India":

- 1. Identify the key contributing factors for the low production and consumption of millets as compared to rice and wheat.
- 2. Devise a 5 year action plan to achieve the following targets:
 - a. Make millets more popular among Indian Consumers
 - b. Promote millet cultivation among marginal and small Indian farmers
 - c. Increase income of farmers producing millets
 - d. Make the millet supply chain more efficient in India.
- 3. Give quantitative estimates explaining the impact of the proposed 5-year action plan on the Indian millet market. Also, include the effect on average income of a farmer due to the plan



Evaluation Process

The evaluation process will be done in two parts:

Solution-Submission: 300 points
 Final Presentation: 100 points

Solution Submission

- Participants are required to go through the problem statement, understand the national and global millet market, and answer the questions asked in the problem statement.
 - The solution document should contain the following:
 - 1. Introduction to the team
 - 2. Well defined answers to all the questions asked in the problem statement.
 - 3. Any extra details that are worth mentioning.
- Any supporting data should be included as an appendix at the end of the document.
- The document should be in PDF format, with text size 12 pt and line-spacing of
 1.5.
- The document should be no more than 15 pages long (excluding the team introduction) and the appendix should be no more than 3 pages long.
- Only the entries sent through the <u>Google form</u> will be accepted.
- Any sort of plagiarism will lead to disqualification.



Final Presentation

- 1. The final presentation would be in ONLINE MODE
- 2. Only teams selected in the first round are eligible for the presentation round
- 3. Those teams who have cleared the 1st round, are required to demonstrate an online presentation in front of the judges.
- 4. The presentations must be enlisting the key points of their proposed solution.
- 5. The Final presentation should wrap up within 10 minutes followed by Q&A (5min).
- 6. Exceeding the time limit may lead to point reduction or disqualification

Things To Note

- 1. This is a group event.
- 2. Each group can have a maximum of 5 and a minimum of 2 members.
- 3. This competition is divided into two stages: Solution submission and Final Presentation
- 4. In case two teams have an equal score, the team who submitted their report earlier will be considered on higher priority.
- 5. Prizes will be given to those participants who will be registering through the Registration portal of Prakriti 2022.
- 6. The decision of judges is final and binding. Team Prakriti reserves the right to disqualify any team in case of violation of any of the above rules or if found doing illicit actions.



Total Prize Money INR 20,000

Document Submission Link: https://bit.ly/manthan22-submissions

Register yourself for PRAKRITI-2022

https://www.prkrt.co.in/Registration

Ask Your Queries

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