

Standard IX

Action Research Project

Topic for 2018–2019

Study of our Food Heritage (Indigenous Food Species)

Introduction

Most of us have childhood memories that are associated with food places—may be restaurants, stalls, eateries or meals cooked at native place or vacations. As more and more food chain restaurants serving frozen, reappportioned or pre-cooked meals spread across the world, much of the nutritional factors are being lost. Concept of healthy food has shifted our focus from the easy to digest, readily available and adapted to our climatic conditions indigenous food crops, vegetables and meat related products to international varieties that claim to have nutritional values.

Local sourcing

Many of us can relate to the local flavours and tastes of our regions. The particular way of cooking food or adding a particular ingredient to enhance the taste or one particular variety of the basic ingredient that is restricted to that particular region. Eg. Rice varieties like *Jiresal*, *Ghansal*, *Havla* etc.

Personal stories

You may recall the way your grandmother used to prepare mango pickle. For this, she used to select a particular variety of local raw mangoes and the local condiments to get that particular flavour.

We have different food culture throughout Maharashtra and every community has its own

food preferences. The methods of preparations and their ingredients are cherished and passed on as secrets from generations to generations. This has created a unique food heritage not only in Maharashtra but also in India as a whole.

But, slowly these traditions are dying out. The food preferences are changing. As we lose our connection with our food and with the people who grow and process it, we lose much of our cultural history and identity.

We often end up buying stereotype vegetables and foreign fad foods, vegetables and fruits available in malls which are far lesser in nutritional value and stale as compared to the native varieties available with local vendor.

UNESCO has included food in the list of 38 elements which are to be safeguarded as Cultural Heritage.

What is food heritage?

Food heritage is a term that encompasses the origins of plants and animals and their dispersal, the sites where people first cultivated plants and domesticated animals, as well as the earliest locations around the world where people first processed, prepared, sold and ate foods. These locations include farms, all types of mills, dairies, orchards, vineyards, breweries, restaurants and cafes, markets and groceries, hotels and inns. The methods of food preparation from a particular region or the ingredients used therein are the part of the food heritage. The way of cultivation

of these food crops also contribute to the food heritage as these methods are responsible for availability of these particular species in these regions.

What is meant by indigenous species?

Native species or indigenous species means the species originating naturally in a particular country or region, as animals or plants; found in nature rather than produced artificially.

Wild vegetables refer to the species which are not cultivated at large scale commercially. They are grown on waste land by tribal communities or collected from their natural habitat and used as source of food.

Importance of study of indigenous food species and food heritage

- According to FAO (Food and Agriculture Organisation of United Nations), globalization has reduced the number of plant species used for food and other purposes from roughly 1,00,000 to about 30. With the global population expected to reach nine billion by 2050, FAO is concerned that the world may not be able to produce enough food to meet the demand. Indigenous and traditional foods - which are sometimes undervalued and classified as 'foods of the poor' or 'forgotten foods' - can play an important role in helping the people who suffer from hunger and malnutrition worldwide.
- Placing too much reliance on just a few crops is risky even at the best of time, especially in developing regions, which are almost twice as dependent on wheat, rice and maize as richer nations. Much else can go wrong, including crop failure, civil wars, commodity price fluctuation, global climate change leading to destabilised food crop production... and so forth. Additionally, with a rise in the global population, the 'Green Revolution' is said to be reaching its limits in generating the

everincreasing amounts of food needed to feed more mouths on the planet. Professor M. S. Swaminathan, one of the leaders of the Green Revolution, had cautioned our farmers that single varieties, genetic homogeneity would increase vulnerability to pest and disease. Therefore, conservation of diversity is important.

- It can help to preserve and promote the world's food heritage. India is known for its rich biodiversity and tribal culture that utilises these varieties to their best.
- The consumption of wild vegetables and plants is one of the strategies, adopted by the local people for sustenance is intrinsically linked to their strong traditional and cultural system and is inseparable.
- The indigenous communities can sale surplus wild edibles and add to their income.
- Diversity of foods consumed provides nutritional diversity and also food during famine or scarcity.
- These edible herbs and plant parts as well as animal resources are rich source of protein, iron, calories, etc. and they are also recognized for their characteristic colour, flavour and therapeutic value, be used in the diets to prevent the nutrient deficiency and degenerative diseases. Many of the plants conserved by ethnic people are used as antidotes for snake bites and scorpion stings, for setting bone fractures by traditional healers, for curing wounds or arthritis, or as abortifacients and as cures for menstrual problems etc.
- **Importance in getting the patent or Geographical Indicator status :** Some of the species that are endemic to a specific region can become the sole property of that region and that could be registered as Geographical Indication e.g. G.I. given to Devgad *Hapus*, Nagpur orange, Beed custard apple, Solapur pomegranate, Mahabaleshwar strawberry etc. Similarly patents could be taken for the food or medicinal products or production technology

developed using these endemic species. E.g. Turmeric, *Tulsi*.

- Despite these beneficial attributes, indigenous food varieties have generally been neglected by researchers and national agricultural programmes because of the large number of species involved, their very localised use, their wild, semi-wild or weedy nature. Consumers neglect them because of the association of leafy vegetables with poor rural lifestyles, which means they are often regarded as a low-status food. There is no awareness about how to clean and cook such food species.
- Awareness about biodiversity around is important for quality education. It helps in creating a bond between individuals and surrounding.
- Hence study, documentation and popularisation of available food varieties is very important.

Few examples of native plant and animal varieties and their uses

Plants:

As food:

- Variety of leafy vegetables available seasonally like Amaranthus, *Bathua*, *Korala*, *Ambadi* (*Gongura*) etc.
- Variety of mangoes like *Payri*, *Rainwal*, *Mankur*, *Kesar* etc.
- *Kokum*
- *Dioscorea*
- Aquatic plants like Water Chestnut (*Shingada*), Lotus, Water Spinach (*Ipomoea aquatica*) etc.
- Cereals
- Rice has large number of varieties like *Dubraj*, *Jiresal*, *Ambemohar*, *Dhansal*, Purple Rice etc.
- Lentils include even Blue *Toordal* and other varieties
- *Dagadi Jowar*
- Varieties of millets
- Bamboo like Manga Bamboo, *Vet*, *Kalak*

As medicines:

- *Hirada*, *Beheda*, Dried stem of Red Lotus, *Amla*, Typha (*Ramban*) etc.
- Variety of grasses like *Vala* or *Khus*, roots and tubers are used for various human and animal diseases.

Other uses:

- Grasses are used in making brooms, curtains.
- Plants are used to catch fish from pond etc.
- Nilambari plant is used as ornamental flower.

Animals:

- Milch animals like Dangi, Kandhari Cow, variety of goats like Sangamneri
- Poultry like *Kadaknath* chicken
- Local fishes like *Maral*, *Matye*, *Shingada*, *Vaam* from freshwater resources and fishes like Bombay Duck
- Variety of edible clams and oysters like *Tisarye*, *Kalvi*, *Vakunda* etc.
- Variety of honeybees.
- There are many organisms like sponges endemic to the coast of Maharashtra which has potential to act as a source of various medicines including cancer.
- Collection of lac, shells, pearls etc. for various purposes including medicinal use and fertilizer etc.

Threats to indigenous species

Urbanisation, introduction of foreign species (eg. Grass carp in ponds destroy habitat of native plant species, thereby threaten the local fish fauna), cultivation of cash crops instead of the native crop species, lack of knowledge about these varieties, pesticides, glamorous branded food etc.

Some aspects of conservation of food heritage

Government of Maharashtra has started a Maharashtra Gene Bank project to study and document the endemic plant and animal

species of Maharashtra. The portal 'Gotul' (www.gotul.org.in) is created to spread awareness about these species and various efforts to conserve biodiversity and heritage are being documented.

- **Study of biology of a particular native species:** Classification, habit, habitat, life cycle, associations with other species if any. This can help in cultivation of such varieties.
- **Study of conservation efforts of heritage food varieties:** Rice varieties cultivated for conservation by Shri. Chandrashekhar Bhadsavle at Saguna Baug, Neral, *Dagdi Jowar* being cultivated at Paithan, Corn varieties conserved by *Bhill* and *Pawra* tribals of Satpuda.
- **Study changes in trends of food consumption over a period:** Effect of globalisation on food habits and its correlation with availability of native food varieties.
- Study of food value/medicinal value of a native species in detail.
- Popularisation of seasonal, local varieties of food species through food festivals, vegetables and fruit show, cookery competition based on themes involving food heritage.
- Documentation of biodiversity by way of field visits (Grassland ecosystem and variety of grasses and their uses in Wadala region) and interviews of people who can share words of wisdom like Shri. Himmatrao Pawar.
- Comparative study of variety of same crop. E.g. Size of grain, soaking time, cooking time, texture of cooked material when hot and once it turns cold (Red Rice is soft when hot; but hardens on becoming cold, some *dals* don't cook soft), colour, aroma, food value etc.
- Comparative study of cooking methodology as traditional and modern and its effect on taste, shelf life and nutritional value. E. g. Grinding in mixer and on stone, Cooking on coal, gas, oven, microwave.
- Study of interrelationship between human activities and availability of species. E.g.

Cropping pattern, dumping of waste, *Charabandi* (prevention of grazing), use of agrochemicals etc.

- Study of interrelationship between living beings for survival. E.g. Prevention of grazing affects survival of local grass species.
- Documentation of traditional recipes associated with festivals like *Rishi Panchami*, *Ganpati* festival, *Holi*, *Eid* etc., customs, medicines, cultivation methods etc. that help in conservation of food heritage. E.g. *Ganpati* festival decorations in Kokan called *Mata*, include seasonal local varieties of fruits and flowers. Students can take help from food heritage experts like Dr. Mohsina Mukadam.

What students have to do?

- Observe local market, fruits, vegetables, other grocery items brought at home, at your native place or any other similar place you have visited.
- Select ANY ONE aspect of study of food heritage.
- Prepare a plan
- Study it in detail
- Record your observations.
- Draw conclusions
- Suggest improvement measures if any
- Write report

Note

- Those who may think of working on arranging events for popularisation or awareness drive through any activity, must plan, execute and analyse pre and post results before writing the project report.
- If planning to study monsoon vegetable/fruits/fish etc., it will not be available after september. Please note.

(Ref.: www.google.com, www.gotul.org.in)