

# International Year of the Millets (2023)<sup>1</sup>

## Archeological Evidence of Millet Growing in Goa

India is the largest producer of millets in the world. This ancient food crop has been mentioned in some of the oldest *Yajurveda* texts, identifying foxtail millet (as *priyangava*) and Indian barnyard millet (*shyamaka*), thus documenting that millet consumption was very common in India, pre-dating the Indian Bronze Age. More importantly, that this crop was also grown by the Neolithic people of Goa - the first farmers have documented it engraved in stone on the banks of *Kushavati*



*Fig.1 Neolithic farmer with his tools facing the ear of millet.*



*Fig.2. Expanded view of the millet ear.*

*River at Usgalimal, Rivona in the taluka of Sanguem. (See Figs. 1&2).*



*Fig.3.The ears of millet*



*Fig.4.Millet grains*

It is therefore fitting that Goa join the rest of the world in celebrating the year **2023 as *the International Year of Millets***, one the earliest domesticated grasses for food.

The simple invention of the stone axe helped humans transition from hunting-gathering nomads to cultivating their own food, leading to stable societies. This transition started some 10,000 years ago in the region of Anatolia, around present day Turkey and the Fertile Crescent. From there, domestication of native plants for food gradually spread east-wards and west-wards. This was the beginning of the New Stone or Neolithic Age.

Legumes, seeds of grains, vegetable and fruits followed the trails of humankind as they crossed continents and oceans to change the botanical face of the earth.

The rock carvings at Usgalimal, estimated to be between 2500 and 4000 BCE old would therefore indicate that within a few thousand years or thereafter, millets were widely grown in many parts of India.

Millet is a generic term used to include a number of small-seeded annual grasses that are cultivated as grain crops, primarily on marginal lands in dry areas of temperate, subtropical and tropical regions. The plants are well adapted to drought conditions.

Presently, several types of millets are grown in India such as, pearl millet (*bajra*), sorghum (*jowar*), finger millet (*ragi/nachni*), proso/common millet (*barri*), barnyard millet (*jhangora*), foxtail/Italian millet (*kangni*) and kodo millet (*kodra*). In Goa, *nachni* (*Eleusine coracona*) and proso millet (*Panicum milliaccum*) are very common and *nachni* is the main ingredient for the traditional Goan workers' porridge (*teezan or tizan*).

The common millet grown in Goa is a domesticated variety of African origin, which spread to Asia in prehistory. It is referred to as *dagusa* in Ethiopia, *ragi* in India, *nachni* in Goa and Maharashtra. This is an annual herbaceous plant widely grown as a cereal crop in Africa and Asia, with some of the varieties having originated in China.

Nutritionally, millets are gluten-free with high mineral content, rich in proteins, dietary fiber, carbohydrates and several phenolic compounds. Cooked as porridge or as flat bread, (prepared from ground

grain) or in combination with other ingredients, millets have sustained the indigenous people and the poor worldwide for millennia.

Before the Green Revolution that began in the 1960<sup>s</sup>, millets made up around 40 percent of all cultivated grains in India contributing more than wheat and rice. The first miracle rice variety IR8 was produced by the International Rice Research Institute (IRRI) in the Philippines, by crossbreeding the high-yielding rice plant from Indonesia with a semi-dwarf variety from Taiwan.

Around the same time improved varieties of sorghum and maize were developed by Indian scientists at the Indian Council of Agricultural Research (ICAR) stations, in collaboration with Rockefeller Foundation, and a high yielding variety of pearl millet at Punjab Agricultural University, Ludhiana. .

Unlike rice and many other grains, millets can be grown in semi-arid areas and being resistant to pests, and with global warming, it may still be the future grain of choice to sustain the growing population of the world, as it has for millennia to the very first farmers.

It is therefore fitting that we celebrate and honor the first farmers of Goa for their invaluable legacy and for documenting it permanently in stone before writing was invented.

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1. The United Nations General Assembly at its 75th session in March 2021 declared 2023 the International Year of Millets, (IYM 2023).

***Themistocles D'Silva, 2023.***