

Editorial

Millets and Important Diseases

Millets are a group of highly variable small-seeded grasses, widely grown around the world as cereal crops or grains for fodder and human food. Millets are important crops in the semiarid tropics of Asia and Africa (especially in India, Mali, Nigeria and Niger), with 97% of millet production in the developing countries. Millets are indigenous to many parts of the world and have been in cultivation in East Asia for the last 10,00 years. They are popular as 'climate smart crops' because of drought tolerance, short growing season and suitability for cultivation on marginal soils under dry, high-temperature conditions even with poor crop management. Millets are important staple foods, particularly in Asia and Africa, besides forage is high quality fodder for domestic cattle.

In India, sorghum is very important followed by pearl millet, finger millet, little millet, *kodo* millet, foxtail millet, barnyard millet and proso millet. They are cultivated right from sea level to high altitude of Uttarakhand in North and Arunachal Pradesh in the North East. Andhra Pradesh, Assam, Bihar, Chattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Odisha, Rajasthan, Tamil Nadu and West Bengal are the important states. The millet grains are gluten free, low on carbohydrates and high on fiber. They get digested slowly giving sustained energy. Millets are ideal for diabetics, help increase the bio-availability of minerals and have strong antioxidant properties. Regular consumption helps in decreasing triglycerides and C-reactive protein. Our millets cook fast and are ideal to make healthy Porridges, *Upma*, *Kheer*, *Kichdi*, *Pongal* and many more.

Though less prone millets are not free from diseases. A wide variety of fungal, bacterial, viral and nematode pathogens besides, witch weed *Striga* parasitize and cause array of diseases to the foliage, stem and ear including grains. However, downy mildews, smuts, grain moulds, blasts, ergots, rusts, foliar spots and blights caused by fungi are devastating. Research has accomplished a good number of improved varieties, hybrids and production technologies for enhanced yields including understanding of the variability of different pathogens. Management strategies including integrated practices for important diseases have been evolved and popularized by laying large scale front line demonstrations (FLDs) in the farmer's field. Diseases like foot rot of finger millet, banded leaf and sheath blight, *kodo* millet poisoning and many leaf blights are becoming major constraints making it necessary to focus studies on the hitherto less known diseases including understanding the aetiology and evolving technologies for minimizing damage. However, as millets are low return crops, mostly cultivated by resource poor farmer on marginal soils with poor management it may not be wise to advocate use of chemicals for disease control, hence emphasis should be on evolving resistant varieties.

Dr A. Nagaraja

Professor and Former P.I. Small millets Pathology
Department of Plant Pathology
College of Agriculture, UAS,
GKVK, Bengaluru 560 065, Karnataka
(anagaraja60@gmail.com)