Finger (Millet) Foods

Finger millet is a traditional crop with a lot of potential. In the semi-arid tropics of East Africa, finger millet is not only important in the diets and economy of subsistence farmers but is also increasingly demanded by urban consumers, processed into flour and porridge. Finger millet is considered the domain of women and its successful cultivation enhances their status at both household and community level. Its high nutritional value helps sustain the malnourished and it is recognised as an important dietary supplement for HIV-positive people. A major constraint to production is finger millet blast, and successful management of the disease will substantially contribute to increased production of the crop to the benefit of producers, processors and consumers. To manage the disease requires understanding – finger millet blast was poorly understood prior to CPP-funded research.

Finger millet is the domain of women in East Africa

The project conducted DNA fingerprinting and molecular analysis to understand the diversity among and within blast populations on finger millet and weeds, particularly wild millet. The results showed that there was little diversity within the pathogen population and that the same strains could cause different symptoms. This suggests that breeding for resistance will be simpler. Field work carried out has shown that seed-borne inoculum can contribute to initial blast development. This knowledge provides a framework for sustainable utilisation of host resistance and disease intervention.

Kenyan and Ugandan farmers are aware of blast symptoms. Project R8030 has identified various germplasm accessions and farmer varieties with low blast levels and good agronomic performance. Promotion of these improved varieties has potential to reduce farm level grain losses considerably. The Government of Uganda has identified millet as a priority crop to improve the livelihoods of internally displaced people. The increased demand for finger millet in East Africa is stimulating the growth of a processing industry in Uganda and Kenya as well as regional trade, especially from these two countries. Mr Issa Wamala, Managing Director of Family Diet, Uganda, has engaged 300 farmers from the Kibaale District for finger millet production. The project team has established a strong working partnership among national, regional and international scientists and the East and Central African Sorghum and Millet Network (ECARSAM), industry representatives and a number of farmer groups. Recently, they have joined a consortium of African, Asian and European organisations seeking to further develop finger millet as a food security crop, thus also developing south-south partnership. A regional workshop at ICRISAT-Nairobi in partnership with ECARSAM will improve connectivity in the farmer-extension-industry-research-policy continuum.

Blast disease affects finger millet at all stages of development

Sexual structure (perithecia) produced by the blast pathogen

R8030: Finger millet blast in East Africa: pathogen diversity and disease management strategies
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