

Abstract

Sorghu (*Sorghum bicolor* (L.) Moench), finger millet (*Eleusine coracana* (L.) Gaertn) and maize (*Zea mays* L.) comprise the major components of human diet in Africa. Other crops such as wheat, groundnuts, pulses (cowpeas and beans) and bananas are also important food crops but to a lesser extent. The objective of this study was to identify *Fusarium* species associated with sorghum and finger millet grains in Western Kenya. There were 19 morphologically distinct *Fusarium* species isolated from sorghum and finger millet grains. These included; *Fusarium compactum*, *F. equiseti*, *F. thapsinum*, *F. verticillioides*, *F. longipes*, *F. andiyazi*, *F. nygamai*, *F. pseudonygamai*, *F. brevicatenulatum*, *F. chlamydosporum*, *F. heterosporum*, *F. napiforme*, *F. graminearum*, *F. pseudograminearum*, *F. oxysporum*, *F. solani*, *F. subglutinans*, *F. semitectum* and *F. proliferatum*. *Fusarium compactum* (14.40%) and *F. equiseti* (9.60%) were the most isolated species in all the districts in both grains while *F. thapsinum* and *F. verticillioides* were isolated in sorghum varieties from all the districts. The overall incidence of *Fusarium* species was 29.66% and 4.87% in sorghum and finger millet respectively. Nyamira district had the highest incidences (62.23%) and Kakamega had the lowest (11.12%). Wagiita variety of sorghum had the highest incidences (28.92%) while Esila had no infection. All finger millet varieties had a low incidence of *Fusarium* of less than 8%. The *Fusarium* species isolated from sorghum in this study coincide with those isolated from other countries but finger millet had fewer *Fusarium* species than in other countries and this could be due to the traditional varieties sampled that have chemicals and a hard seed coat which prevents fungal penetration. The presence of fumonisin producing species like *F. verticillioides* and *F. thapsinum* could pose cancer related problems to the people consuming these grains.