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Survey of fungal diseases associated with amaranth (Amaranthus species) in peri-urban vegetable farms in Kumasi and Tamale metropolis of Ghana

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Abstract

Amaranthus species is an important leafy vegetable in Ghana; however, foliar diseases of the crop reduce the marketable and edible portions as well as income to farmers. To facilitate the development of disease management strategy, there is the need to document various diseases limiting amaranth production. In view of this, surveys were carried out in forty-three peri-urban vegetable farms in the Kumasi and Tamale Metropolis of Ghana to assess the prevalence and severity of fungal diseases associated with amaranth. Farms were selected using snowball pattern and on each farm, disease incidence and severity were assessed on 45 plants. Disease incidence for any particular fungal disease was calculated as number of plants showing symptoms compared to total number of plants selected whilst disease severity was rated as extent of tissue damage using a severity scale of 1-5. Survey results revealed anthracnose; stems cankers, wilting and wet rot as most prevalent diseases on amaranth. Wilting was the most frequent disease observed; occurring in 95% of farms visited whilst anthracnose wet rot and stem canker were observed in