Incidence of aphid-transmitted viruses in farmer-produced seed potato tubers in Kenya

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Abstract:

A survey was carried out using structured questionnaire in six potato growing districts and twelve markets to establish seed potato production practices and determine incidence of viruses in farmers’ produced seed potato. Samples of potato tubers were collected for serological analysis by Double Antibody Sandwich Enzyme-Linked Immunosorbent Assay. The viruses detected in tubers were potato leaf roll virus, potato virus A, potato virus M, potato virus S, potato virus X and potato virus Y. The most prevalent virus was potato virus S and there were significant differences among the districts and markets in the incidence and titre of all the viruses. There were significant differences among the markets in virus incidence of all the potato viruses, except potato virus Y. The result indicated that seed potato from the farmers is contaminated with viruses and therefore there is need to clean, multiply and distribute preferred varieties. Given, that farmers own small parcels of land, bulking by farmers’ groups can be done for the supply of seed potato, and incorporate control methods to reduce re-infection with viruses.