

Species of pathogens associated with fruit rots in apple orchards of Belarus

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The apple is the most commercially important fruit crop in Belarus. Fruit rots are widely spread diseases leading to significant yield losses. The aim of the study was to determine the incidence and identify the causal agents of apple fruit rots in the vegetation period. The investigation was done during 2013–2015 at conventionally managed orchards. Identification of phytopathogens was carried out using microbiological and molecular diagnostic methods.

As a result of data analysis of phytosanitary inspections conducted in apple orchards the spread of several fruit rots affected by pathogenic fungi was noted. It was determined that the most frequently observed pathogens were *Monilinia fructigena* Honey and *Monilinia laxa* (Aderh. & Ruhland) Honey fungi causing brown rot. The disease occurred annually thus the incidence varied from 0.3 to 9.0 %. During fruit ripening stage the development of bitter rot (*Colletotrichum* spp.) and bull's-eye rot (*Neofabraea alba* (E. J. Guthrie) Verkley) was noted. The pathogens damaged about of 0.2–1.7 % of apple fruit. Gray mold caused by the fungus *Botrytis cinerea* Pers. occurred sporadically mainly under warm and wet weather conditions. The incidence of the disease has made 1.0–1.5 %. The development of cork rot caused by *Alternaria* species was noticed in years with high temperature during fruit growth. The percentage of decayed fruits didn't exceed 1.2.

Keywords: apple fruit rots, causal agents, disease incidence