

# IMPORTANT AGRO – ECONOMIC RESEARCH ASPECTS OF HARMFUL ORGANISMS OF STRAWBERRY CROP *FRAGARIA MOSCHATA* IN FIELD CONDITIONS, THE CENTRE, MOLDOVA

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The main strategy in the development of Moldova fruit growing consists in an efficient exploitation of existing plantations with a potential unspent production and their gradual replacement with new structures of surfaces including strawberry plantations in super intensive systems that offer 2-3 annual harvests by using maximum ecological, agro – technological and economic factors, achieving high yields of fruit berry competitive both in the internal market and for canned food production industry, processing and freezing them in certain periods, for trading systems of internal and external market.

Moldovan pedoclimatic conditions makes strawberry crop be more sensitive to attack of phytopathogens compared with gooseberries, currant, raspberry, blackberry, it causing serious early damage to strawberry plant. A key aspect in the broad and significant study of this remarkable culture is the investigations of phytosanitary monitoring of harmful organisms on strawberries crop and environmental factors as significant indicators, which determines the degree of affection, extensivity of key diseases and phytophagus pests on strawberry culture.

The actuality estimates the purpose and objectives of the investigations, with references to the achievement phytoparasitological monitoring, establishing the etiological composition, the degree of affection of abundance and frequency of harmful organism's complexes on strawberry crop, in the condition of the Centre of the Republic of Moldova, being subsequently applied in the development of processes for tracking and forecasting significant ecological protection for this crop.

Evidence surveys for diseases, pests and complexes phytonematode parasites have been achieved during periods of the growing season (April-September 2016) in the productive plantations of new type, in commercial plantations of reproduction seedlings and strawberry fruit with some varieties performed for imports from Center area (Nisporeni, Ialoveni, Orhei).

As a result of recording and analysis of the composition of etiological key diseases, strawberry pests that were appreciated in the active period of vegetation, there was found a significant diversity of nine specific diseases highlighted in various significant values (5-35%) of the degree of extensivity and attack on leaves, shoots, fruits such as: red stele (*Phytophthora fragariae* var. *fragariae*) and crown rot (*P. cactorum*), noble rot (*Botrytis cinerea*), powdery mildew (*Oidium fragariae*), white leaf spot (*Mycospaerella fragariae*), red leaf spot (*Diplocarpon aerliana*), brown leaf spot (*Dendrophoma obscurans*), marginal yellowing (*Strawberry yellow virus*), the wrinkling of strawberry leaves (*Fragaria vitis* 2 Smith), the wilting of plants (*Verticillium dahliae*). From this crop pests more frequently were detected both specific diseases, as well as the diversity of species of insects and mites that simultaneously with plant diseases have affected every organ worthing 3-25% of the attack level, namely: click beetles (*Agriotes* sp.), black weevil (*Anthonomus rubi*), Apple Blossom Beetle (*Epicometis hirta*), vine weevil (*Otiorhynchus sulcatus*), the strawberry aphid (*Myzus fragariae*), twospotted spider mite (*Tetranychus urticae*), cyclamen mite (*Tarsonemus fragariae*). In the same situation arise the complex of nematodes phytoparasitac which attack generally all organs of the plant, causing necrosis, nodule galico at the level of roots, and some species migrate upward through the plant tissues until the stems, leaves, flowers, fruits, and also served as a role of vectors and pathogenic microflora of pedobionte insects. As a result of evidence and analyzes of parasitic nematofauna at the strawberry crop there were found phytohelmiotic affections worthing 3 – 18%, caused mostly by some species specific for this crop, namely: Meloidogyne, Ditylenchus, Aphelenchoides, Pratylenchus, Tylenchus și Rotylenchus. The results of carried out investigations at the culture of strawberry plant diversity reflects the invasion of harmful organisms, causin serious damages to plants and strawberry fruit in the process of dynamic growth and development. The degree of disease and extensivity for this culture rests mostly in diseases that goes along with flowering until finishing harvesting berries, but insects and the parasite phytonematode complexes cause serious damage both during the growing season, and preliminary phases of exit and route during the rest period as perennials undergo attack both ontogenetic and phylogenetic as well. Carried out researches are welcomed and applicative in the development of short and long term forecasts, for methods of prevention and protection integrated over all bodies reported.