UDC 635.21:632.4:632.11

O. VASHCHYSHYN
Institute of Agriculture of Carpathian Region of NAAS

INFLUENCE OF ABIOTIC FACTORS ON INTENSITY DEVELOPMENT OF LATE BLIGTH POTATOES AT CONDITIONS OF WESTERN FOREST-STEPPE OF UKRAIN

In the western Forest-Steppe of Ukraine, almost every year, there is a strong development of late blight, one of the most dangerous diseases of potatoes, the causative agent of potato late blight is the *Phytophthora infestans (Mont) de Bary* mushroom from the Oomycetes class. The main meteorological factors that determine the development of the fungus are temperature and humidity.

As a result of the appearance in the population of *Phytophthora infestans (Mont) de Bary* of two types of sexual compatibility A_1 and A_2 − the genital generation of the pathogen, which is characterized by high virulent and aggressive properties, can quickly overcome the resistance of registered and prospective varieties of potatoes.

One of the conditions in the system of potato protection from late blight is the introduction into production of potato varieties resistant to disease.

The study of the dynamics of potato late blight development in field conditions has shown that from the phase of budding to the phase of natural dying of potatoes there was a strong development of the disease and in 2014 ranged from 0,2 to 91,1 %, in 2015 − from 0,7 to 92,8 %.

The study of the effect of temperature on the intensity of sporulation and the duration of the incubation period of late blight in the laboratory conditions of 2014−2015 showed that the largest sporulation of the fungus was at a temperature of 25 °C.

Strong sporulation (3 points), which spread throughout the leaf surface for the shortest asymptomatic period (3 days) was observed in varieties Vinetta and Bellaroza.

The shortest asymptomatic period (3 days) at a temperature of 25 °C in 2014 is noted for varieties Bellaroza, Vinetta, in 2015 − Agrarna, Bellaroza, Vinetta, Dnipryanka, Serpanok.

An analysis of our studies showed that under conditions of climate change, the pathogen of late blight adapted to high temperatures and is capable to sporulation.

In laboratory terms at 30 °C in 2014, the sporulation intensity was 5−9 points, the duration of the incubation period − 5−13 days, in 2015 − accordingly 5−9 points and 7−12 days.

The most prolonged asymptomatic period 2014 was observed on the leaves varieties of Lastivka (13 days), Krasa (12 days), Anosta (11 days), in 2015 the duration of incubation period (12 days) was observed in variety Agrarna for intensity of sporulation 8 points.

At a temperature of 30 °C sporulation was absent on the leaves of potato varieties: in 2014 − Shchedryk; in 2015 − Anosta, Krasa, Lastivka, Shchedryk.