

Sergio Pennazio

A History of Virus Diseases of Plants: From the Beginning to 1950

Abstract. The history of plant virology has given much space to viruses, especially to *Tobacco mosaic virus*, but very little space to virus diseases. Still, viruses were clearly characterised only more than fifty years after the first observations and descriptions of diseases appearing infected with ineffable agents and, until the 1950s, most of the plant virologists spent a lot of time to study the disease as the preliminary but absolutely necessity in order to identify the virus. The first virus diseases to be investigated were the “tobacco mosaic” in Europe and “rice stunt” in Far East Asia, and both represented useful models for performing a great number of similar researches. The study of virus diseases made necessary the employment of several strategies, and the introduction of new techniques of research. The simple observation of external symptoms, not too selective and requiring broad experience, was followed by histological and cytological analyses which, in the period herein considered, were carried out by light microscopic methodologies. These analyses helped the research of the physiological causes of symptom formation, which, unfortunately, did not always profit from the interest of plant physiologists and biochemists. This schematic series of efforts was not always followed, since research often proceeded in an erratic way, according to the interest or the possibility of single virologists. However, the comprehensive view emerging from the historical analysis of results (for example, from the first textbook of this discipline) allows us to outline that logical sequence of events we have mentioned above. Obviously, the diffusion of viruses in field was one of most investigated line of research, as well as the individuation of the losses produced by virus diseases. From these fields of research (epidemiology and control), it was possible to enter the war to the most pathogenetic viruses by obtaining the first positive successes: this war became more and more pressing and is still current by the use of a very high technology. The work performed during seventy years at first by beginner virologists and afterwards by mature virologists, amounts to a splendid page of history of virology: This page has been written by hundreds and hundreds researchers, most of them quite neglected by the new generation of plant virologists. This history also represents a grateful homage to those researchers.