

Field diagnosis of pests and diseases:

Do not forget your boots and your smartphone!



MARIANNE LOISON

Easy diagnosis with a smartphone and images has become possible and reliable. Ephytia software and its applications are now online on INRA website in order to help advisors and pathologists in their work.

Marianne Loison reports from the French Congress of Phytopathology that took place earlier in June this year.

Make it easier! Diagnosis in the field is not always simple and clear. Though, looking precisely at the crop is always necessary to identify a problem. First you have to make the difference between biotic and abiotic problems. A biotic damage is due to parasitism, but it can be caused by a pest, a virus, a disease, a nematode or any another invader... An abiotic damage can be the consequence of nutrition deficiency, climate stress, phytotoxicity, physiological disorder... The problem is that very often, symptoms can be very similar even if causes are totally different

FOURTEEN CROPS COVERED BY INRA SMARTPHONE APPLICATION

At INRA Bordeaux Research Center (France), Dominique Blancard has worked to synthesize its knowledge in a program one can reach online. This application is called Ephytia and can be reached through the INRA portal.

It is already available for 14 crops. Dominique Blancard is a well-known pathologist who has been working since the eighties on vegetable diseases. He has gathered a great knowledge on symptoms and disease identification. Then he has tried to establish an easy way to compare different symptoms with images.

However, we still have to go in the field to look at the problem before giving a diagnosis!" says Blancard." This is now also possible with nomad tools such as a smartphone , and our modules Di@gnoplant and Vigi@nt. I have designed a field-application that is very easy to use".

The next step for INRA is to help in the choice of plant protection methods with smartphones. "We develop 'biocontrol with Koppert for greenhouses. This application helps to identify a pest and find the best auxiliary against it. It is available for most vegetables

crops and it will be soon available for fruit crops." Blancard has another idea: using the diagnosis in the field to collect information for the network. "We would like to make participative science and gather fresh detections of pests and diseases from technicians." The idea is also to identify the presence of new pests such as bacteria Xylella, which appeared in Italy and could make its way to France and other nearby countries." This bacteria's symptoms on various crops are not well-known. Building a network on its identification could be very useful to the whole community. But he recognizes that research needs a good network of pathogens experts to detect upcoming pests and diseases.

In the near future, Blancard plans to widen Ephytia application (<http://ephytia.inra.fr>) to many other crops, with the contribution of other Institutes. ■



The INTERNATIONAL BIOCONTROL MANUFACTURERS ASSOCIATION CELEBRATES ITS 20 YEAR ANNIVERSARY

In 1995 Bernard Blum called a number of companies together to develop the idea of the formation of a biocontrol association. These visionary leaders anticipated an important and growing industry in the field of plant protection. Biocontrol was developing quickly in those early days, but there were also great challenges to the industry. Some companies did not survive the early stages of industry development. Registration was recognized as a huge hurdle to placing products on the market and the delays caused many innovative companies to suffer from this. It was necessary to organize the industry and start a dialogue with authorities. Beyond these regulatory issues it was also deemed important to promote biocontrol widely and to reach out to various stakeholders. A first meeting was held early 1995 and was followed by a second meeting on September 14 in Paris. At this meeting the

International Biocontrol Manufacturers Association, then abbreviated as BIO International, was created, having its seat in Paris. About 15 member companies were present. Bernard Blum was appointed as the first president of IBMA.

The first General Assembly Meeting (AGM) was held in Brighton, UK, on November 23, 1995. Thirteen companies were represented by about 20 persons, 7 companies were recorded as absent. Four Professional groups were established, the same ones still existing as the backbone of the present structure. Further, three Working Groups were initiated: Regulatory Affairs, Standards and, Safety and Promotion. The heads of all these groups formed the Executive Committee, together with the President and the Treasurer. IBMA was officially founded and commenced its activities!