Di@gnoPlant and VigiPl@nt: field level diagnosis, surveillance and detection of plant diseases using smartephone applications

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Summary

The early and reliable identification of a disease and the timely detection of emergent pests are crucial elements in plant protection. We have developed two applications for smartphones to help identify (Di@gnoPlant) and locate (VigiPl@nt) diseases in the field.
With Di@gnoPlant, users are able to identify diseases on a range of crops (grape, vegetables, tobacco…) via a smartphone (available from App store or Google Play), with the assistance of an image identification module. They can then obtain information on the characteristics of the identified disease/pathogen: biology of the pest, symptomatology and a description of optimized protection methods.
Through the mobile Vigipl@nt application, users can report the presence of pathogens or of emergent diseases and therefore contribute to a surveillance network. This involves making observations and taking pictures of symptoms, filling out a form on the smartphone. Dated and geotagged, the information is stored or transferred directly to the e-Phytia database. Pathogen/disease presence or impact maps can be displayed on the smartphone.

Di@gnoPlant® provides knowledge on the pests and diseases of plants, a diagnosis tool, and comprehensive information detailing the symptoms of the identified disease, the biology of the pathogen, and methods to control it.

Each application, interactive and easy to use, allows to know the disease profile of a culture and helps to identify them using high quality images.

Image diagnosis

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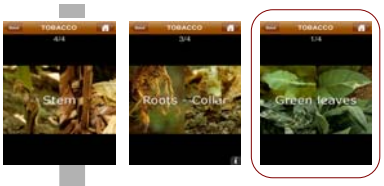
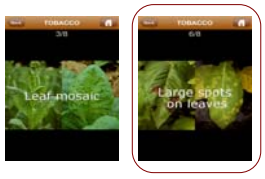
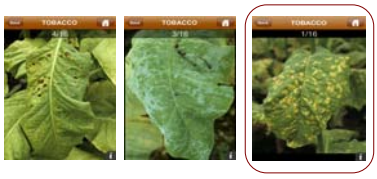
1-Locate symptoms on tobacco plant



2-Specify characteristics of symptoms



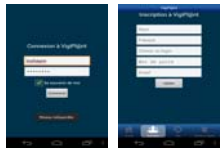
3-Select symptoms that match



4-Diagnosis **5-Information**

VigiPl@nt® allows to collect some observations and photos of a diseased crop with a smartphone. Dated and geotagged, the information is stored or transfered directly to the ephytia database. Diseases and pests distribution and density can be displayed on the smartphone screen.

1-Register/Identify yourself



2-Specify the parasitic and cultural contexts

3-Geo-locate the diseased plant, take photos of symptoms, and send the statement

4-See the disease distribution and density

Now, have a try on these symptoms

http://ephytia.inra.fr/fr/Home/index

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