



Extended Diagnostic Expert System (XDES) Task Force

CORESTA CONGRESS BERLIN

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- ❖ In 2013 DEXT TF (Diagnostic Expert System Translation) completed its work and was disbanded
 - the e-Phytia® tobacco website went on-line
 - a mobile application called Di@gnoplant Tobacco® was created for smartphones and tablets
 - It was presented at AP2013, TWC2014 and AP2015
 - DEXT was disbanded
 - It was time to extend the scope of the TF to an international level
 - Task Force Extended Diagnostic Expert System (XDES) was created





DI@GNOPLANT® TOBACCO

A NEW MOBILE TOOL TO IDENTIFY TOBACCO DISEASES IN THE FIELD

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DI@gnoplant Tobacco is available on smartphones and tablets (Apple and Android) to help diagnose tobacco diseases by using the content of the INRA e-Phytia® website.

It provides:

- knowledge of the pests and diseases of tobacco;
- identification of diseases with the assistance of an image identification module;
- access to comprehensive information on the symptoms of the identified disease, the biology of the causal agent and protection methods to control the disease.

Diagnosis by image identification

1 Locate symptoms on tobacco plant



2 Specify characteristics of symptoms



3 Select symptoms that match

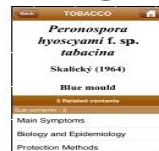


Index to disease information



Fact sheets

4 -Diagnosis



5 -Information



NOW, HAVE A TRY ON THESE SYMPTOMS



VIGIPL@NT® : A future application for tobacco?

A complementary mobile tool for geolocation, epidemiologic monitoring to be used with Diagnopl@nt or separately.





Objectives of XDES

- 1. Collect international data on plant diseases, such as pictures, descriptions, diagnostic, available treatments, etc.**
- 2. Format this information for uploads on the e-phytia/tobacco website and related portable applications.**

Purpose

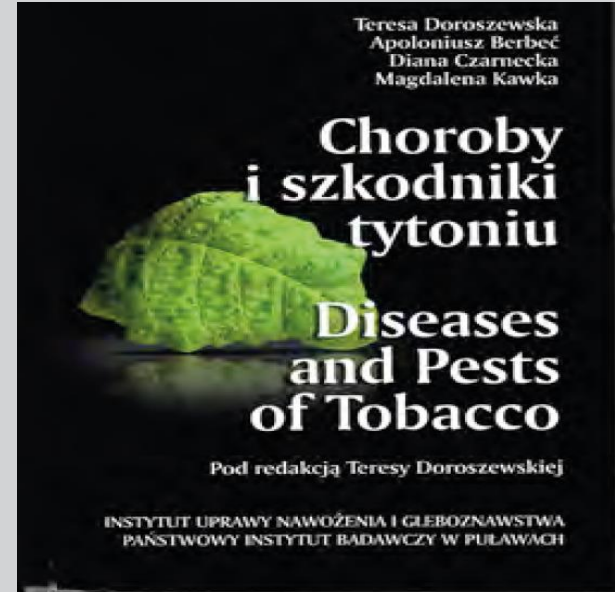
- **to add new information to already accessible data**
- **to collect additional information**
- **to get other countries or institutions to participate**

- ❖ **Additional information from U.S. situation was provided by NCSU :**
 - **Blue Mould**
 - **Fusarium Wilt**
 - **Bacterial Wilt of Tobacco**
 - **Tomato Spotted Wilt Virus (TSWV)**
 - **Damping-off (Sore Shin, Target Spot)**
 - **Black Shank, Stem Rot (Athelia Stem Rot, Southern Stem Blight)**
 - **A section on seedlings was added to the “Diagnosis by Image”**

- ❖ In May 2015 INRA started to add new photos coming from the Polish **Institute of Soil Science and Plant Cultivation**
- ❖ Now the French version is finished, the photos will be added to the English version and the legends will be translated into English
- ❖ Today this work is still going on but will be completed in the near future

All the new pictures come from the book by:

- **Teresa Doroszevska**
- **Apoloniusz Berbec**
- **Diana Czarnecka**
- **Magdalena Kawka**





Bridging the gaps

- ❖ **December 2015 : INRA – CORESTA Meeting in Paris**
- ❖ **Cooperation with INRA was reinforced in December 2015**
- ❖ **A big potential**



How your work can be visible and help others

You

may have local observations on diseases and pests
(pictures, descriptions, diagnostic, available treatments)
which could complete the already existing fact sheets

Send us your information in English

**Evaluation of all information is submitted to INRA experts
for approval before publication**



Members of the TF

❖ **Coordination between contributors and application developers**

- **Eeva Marignac**
- **SC Liaison: Irving BERGER**

❖ **Contributors**

- **Mina Mila for the U.S.A.**
- **Teresa Doroszewska & al. for Poland**



❖ DOWNLOADS

- Over 1987
- From United States, South America, China, France

Many thanks to:

- **Dominique Blancard (INRA)**
- **Jean-Marc Armand (INRA)**
- **Asimina Mila (NCSU)**
- **Teresa Doroszewska and all other collaborators!**