PlantCT™
making plants healthier

PLANTCT IS A COMPLEX SYSTEM,
which consists of vineyard plant protection station(s), internet backend infrastructure and advanced software.

WHAT DOES THIS SYSTEM DO?

- It constantly monitors the weather and the plants, reducing the negative effects of weather on the plants and helps the user to intervene in time.
- The Infection Warning System helps users determine when to apply infestations control measures to avoid infections (when the appropriate service is ordered). The system makes predictions based on mathematical models and visualises them for the user the probabilities of occurrence of infections calculated from the models.
- The information displayed is not a substitute for decision making, but helps to make the right choice about the right chemical application. The system continuously monitors the probability of pathogen spread, using measured data to process mathematical models developed over many years of Hungarian and international research functions that show how favourable conditions are for a given disease.
- PlantCT's measurement data are accurate, and our system is intended to help the viticulturist to make the right decisions. Currently, 4 types of grape diseases can be detected Grape Black Rot model, Grape Downy Mildew model, Grape Peronospora model, Grape Blight model.
- The data that can be displayed depends on the sensors ordered/used.
- The central unit also periodically sends GPS coordinates to the server.
- The software provides hyperlocalized forecast data based on coordinates.

COMPONENTS OF THE LATEST PLANTCT STATION

(sensors can be added continuously)

Central unit + sensors

Available sensors:

- **Humidity and temperature sensor**
- **Precipitation measurement sensor**
- **Leaf Moisture sensor**
  This sensor is essential for forecasting models.
  The measured values are essential for setting up the models, because many risk factors that are harmful to the plant are related to the moisture on the leaves.
- **Wind direction and wind speed sensor**
  The sensor is located at the top of the unit.
  It can be used to determine wind strength - important for spraying and disease control.
- **Soil sensor**
  Soil temperature and moisture information based on data measured at different depths.
- **Solar radiation sensor**
- **Hail sensor**

The sensors take measurements which are transmitted to the central unit. The unit sends data every 20 minutes for every minute of the hour, in case of an ideal connection, which is processed by the server. The data processed in the cloud is also displayed in graphical form on the user's computer (desktop) and mobile application (smartphone) for easy transparency.

MONITORING SERVICE BY PLANTCT

PlantCT decision support service through internet

- secure storage and maintenance of **measurement data** on a central remote server
- recording and secure storage of the field book entries (text entries, photographs, spray information) in our system
- **backing up measurement and management data** and restoring them if necessary
- the device displays **GPS coordinates** with high accuracy (accuracy may be affected by satellite reception)

- The sensors give our partners an accurate picture of the weather parameters in their area. They can then use these meteorological parameters to draw the right conclusions about upcoming plant protection problems and treatments.

- PlantCT's monitoring stations provide farmers with continuous monitoring of their fields, with data updated hourly. We want to be a reliable, full-range partner for farmers. Solutions we offer for plant protection and meteorological forecasting fit into Integrated Pest Management, IPM, as we want to provide our partners with the most accurate recommendations for the causality of plant protection interventions.

- Causality is an important criterion for effective management. By taking into account the constantly updated data we provide, it is possible to make the most accurate decisions possible (from a plant protection point of view). This information can be downloaded very easily using a computer or any smart device.

- The phrase „for healthier plants" means that the PlantCT team is committed to the health of our plants. Accordingly, we make calculations not only on plant development from the data collected by our monitoring stations, but also on the pathogens that damage our plants. These data are displayed in diagrams called infection models.

HEADQUARTERS

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