

## PODS: Plant Observer & Diagnostic System — Features\* List

- 1) Currently supported plant cultures: Canola (*Brassica napus* L. ssp. *napus*)  
Sunflower (*Helianthus annuus*)
- 2) Continuously sensed environmental parameters: air temperature, soil temperature, air humidity, soil moisture, solar intensity. The listed environmental parameters provide indispensable inputs for the contamination- and infection-estimating models. Highly-sophisticated, complex, estimated BBCH value-based models are applied. Wide range of sensing mechanisms are used (terrestrial sensors, aerial- and satellite imagery)
- 3) Using fenological modelling to estimate susceptibilities for the following pathogens and pests (Fungi, Insects, Acari)
  - 3.1) for Canola
    - Brassica pod midge (*Dasineura brassicae*)
    - Cabbage seed weevil (*Ceutorhynchus obstrictus*)
    - Cabbage stem flea beetle (*Psylliodes chrysocephala*)
    - Cabbage stem weevil (*Ceutorhynchus pallidactylus*)
    - Pollen beetle (*Meligethes aeneus*)
    - Rape stem weevil (*Ceutorhynchus napi*)
  - 3.2) for Sunflower
    - Sunflower downy mildew (*Plasmopara halstedtii*)
    - Sunflower white mold (*Sclerotinia sclerotiorum*)
    - Sunflower stem cancer (*Diaporthe helianthi*)
    - Black bean aphid (*Aphis fabae*)
    - Leaf-curling plum aphid (*Brachycaudus helichrysi*)
    - European sunflower moth (*Homoeosoma nebulellum*)
- 4) Estimating volume and date of harvest of the supported plant species
- 5) Early warning of growth stages
- 6) Integrated, automatically updated, countrywide dependent chemical database to minimized and professional spraying with allowed chemicals
- 7) Field-book handling (administering working actions on the plant). Standardized interfaces for frequently used extant accounting subsystems
- 8) All the features are remotely controlled via Internet by any browser based device (desktop computers, notebooks, tablets, or smartphones)
- 9) Wide range of marketing methods, close co-operated, flexible business structures, individual needs, continuous technical and business advisement are evidently available

### \*Remark:

The feature is (1) an expressly profitable and individual measurable property or characteristic of a phenomenon (2) expressed with the customer's terminology and (3) being observed directly by the customer.