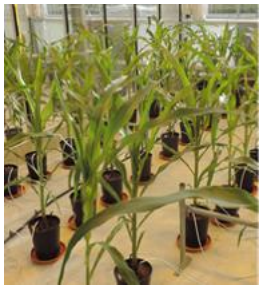
Varietal screening

Under controlled and semi-controlled conditions

Vegenov can help you phenotype your plant material (genetic resources or plants under breeding process) to evaluate:

- **Disease resistance/tolerance of genotypes:** see our main tests on the following page
- **Varietal tolerance to abiotic stresses** (water, heat, nutrients and salt): measurements of plant growth, stomatal conductance, nutrient uptake and assimilation by the plant, stress markers (e.g. proline), etc.
- **Sensory and nutritional quality of harvested products** (color, taste, texture, chlorophylls, glucosinolates, etc.)
- **The interaction of varieties with Biosolutions (Biocontrol and Biostimulant)**



Study of tolerance to water stress

Assessing disease resistance

In vitro root development study

Measurement of stomatal conductance

Our main crops:

Field crops (corn, wheat, potatoes, rapeseed, etc.)

Vegetable crops (tomato, lettuce, cucumber, cabbage, etc.)

Our growing areas:

- 1500 m2 greenhouse divided into 22 independently regulated compartments
- 12 climate-controlled growth chambers

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The pathotests worked on at Vegenov:

Plant		Disease	Pathogen (fungus – bacteria)
Cereals and other field crops	Wheat	Septoria Fusarium blight Damping off	*Septoria tritici* *Fusarium graminearum* *Fusarium graminearum*
	Rapeseed	Sclerotinia	*Sclerotinia sclerotiorum*
	Fava bean	Rust Grey mold	*Uromyces fabae* *Botrytis fabae*
	Flax	Verticillium wilt	*Verticillium dahliae*
	Potato	Downy mildew/Late blight Rhizoctonia	*Phytophthora infestans* *Rhizoctonia solani*
Fruit and vegetables	Artichoke*	Downy mildew	*Bremia lactucae*
	Cabbage and cauliflower*	Ringspot disease Downy mildew Black rot Club root	*Mycosphaerella brassicicola* *Peronospora parasitica* *Xanthomonas campestris* *Plasmodiophora brassicae*
	Semy-dry bean (Coco de Paimpol)	Bacterial brown spot disease	*Pseudomonas syringae*
	Cucumber	Powdery mildew	*Erysiphe cichoracearum*
	Spinach	Damping off	*Pythium* sp.
	Strawberry*	Powdery mildew	*Podosphaera aphanis*
	Bean	Damping off	*Botrytis cinerea* or *Pythium* sp.
	Lettuce*	Downy mildew White mold Damping off	*Bremia lactucae* *Sclerotinia minor* *Rhizoctonia sp.* or *Pythium* sp.
	Melon	Downy mildew Powdery mildew	*Pseudoperonospora cubensis* *Sphaerotheca fuliginea*
	Pea	Downy mildew	*Peronospora viciae*
	Tomato*	Hairy root Leaf mold Downy mildew/Late blight Powdery mildew Grey rot Verticillium wilt	*Agrobacterium rhizogenes* *Cladosporium fulvum* *Phytophthora infestans* *Oidium neolycopersici* *Botrytis cinereal* *Verticillium dahliae*
Ornamental plants and herbs	Basil	Downy mildew	*Peronospora belbahrii*
	Rose*	Powdery mildew Rust	*Sphaerotheca pannosa* *Phragmidium mucronatum*

* Field tests can also be carried out by our partner, the CATE experimental station (GEP)

Additional pathogenic tests are under development and can be developed under request.

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