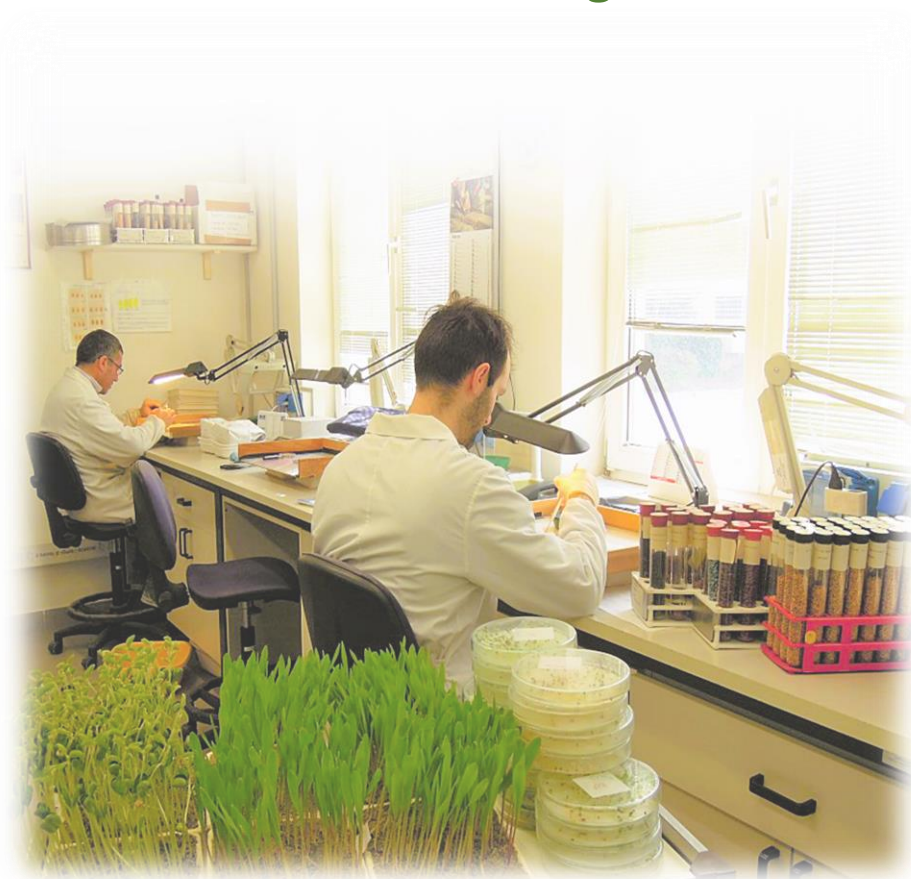


Research Centre for Plant Protection and Certification

Seed Area - Lonigo Office



CREA-DC Lonigo (VI)

CREA - Council for Agricultural Research and Economics

CREA is the main Italian research organization focused on food and agriculture and it operates under the supervision of the Agriculture Ministry (MIPAAF). CREA scientific competences embrace agriculture, zootechny, aquaculture, forestry, agro-industry, nutrition and socioeconomics.

CREA is organised into 12 Research Centres located throughout Italy and comprises several office, laboratories, experimental farms with more than 2000 employees.

Every research centre has its own field of study. **Plant Protection and Certification Centre** is the national reference point for the protection of plants against pests and diseases and for seed certification including variety testing for listing on the National Catalogue.



CREA-DC - Plant Protection and Certification Centre – Seed Certification Area

In addition to the role of plant protection, a specific area, with technical and administrative competences is dedicated to seeds and play the role of designated organization that carries out official seed certification provided by community and national rules concerning seed production and marketing.

Seed certification area is organized in 8 territorial offices (*Milano, Tavazzano, Vercelli, Lonigo, Bologna, Rome, Battipaglia, Palermo*) dedicated to **official seed certification and control** including technological, phytosanitary and genetic analyses and testing.

Moreover, on behalf of MIPAAF, it coordinates the variety testing for registration of new plant varieties in the official catalogue and to obtain plant breeders' rights of a variety.

CREA-DC seed area, checking the whole seed production chain, ensure the seed quality and traceability. Field inspections are carried out in order to assess the distinctness and purity of seed crops. After seed selection and packaging at seed companies, seed samples are collected and submitted to CREA-DC laboratories for the analyses provided by the regulations.

Accordingly with the current legislation, seed placed on the market must be officially certified and belong to a registered variety. Seed certification guarantees that all certified seed meets prescribed standards for varietal and purity identity, seed health, germination and freedom from foreign materials. A seed certification scheme provides a guarantee that seed is properly labelled, high in quality and suitable to be marketed.



Lonigo Office

Lonigo office is provided with a **seed testing laboratory**, **seed health laboratory** and an **experimental farm**. It is specialized in seed quality analysis (germination, physical and health analyses) and in experimental trials for the agronomic and varietal testings of new plant varieties for listing in National Catalogue of Plant Varieties. The experimental farm includes two experimental fields in Lonigo (VI) and Bovolone (VR) with a total surface of 14 hectares dedicated to field trials.

The office contributes to the inspections and controls of seed companies and farmers located in Trentino Alto-Adige region. This activity is carried out in collaboration with the office of Bologna.



Seed quality analyses

The seed testing laboratory examines every year about **9000 seed samples**, comprising cereals, oilseeds, fodder and vegetable crops belonging to over 80 different botanical species. Every seed sample is tested for **germination, purity and other crop seed content** in

order to confirm the compliance with requirements for seed certification. The office participates to ISTA (International Seed Testing Association) Proficiency Tests and collaborates in the organisation of courses and examinations targeted to seed analysts of private seed companies.



Phytosanitary analyses

The seed health laboratory examines about **2000 seed samples** every year, mainly soybean and sunflower, in order to identify the presence of **RNQPs** (Regulated Non-Quarantine Pests). The most important detected **seed-borne diseases** are *Phomopsis/Diaporthe* complex, *Botrytis cinerea* and *Plasmopara helianthi*. Moreover, it performs serological tests for the detection of potato viruses (PVY, PLRV) in order to obtain seed potato certification.

Plant varieties testings

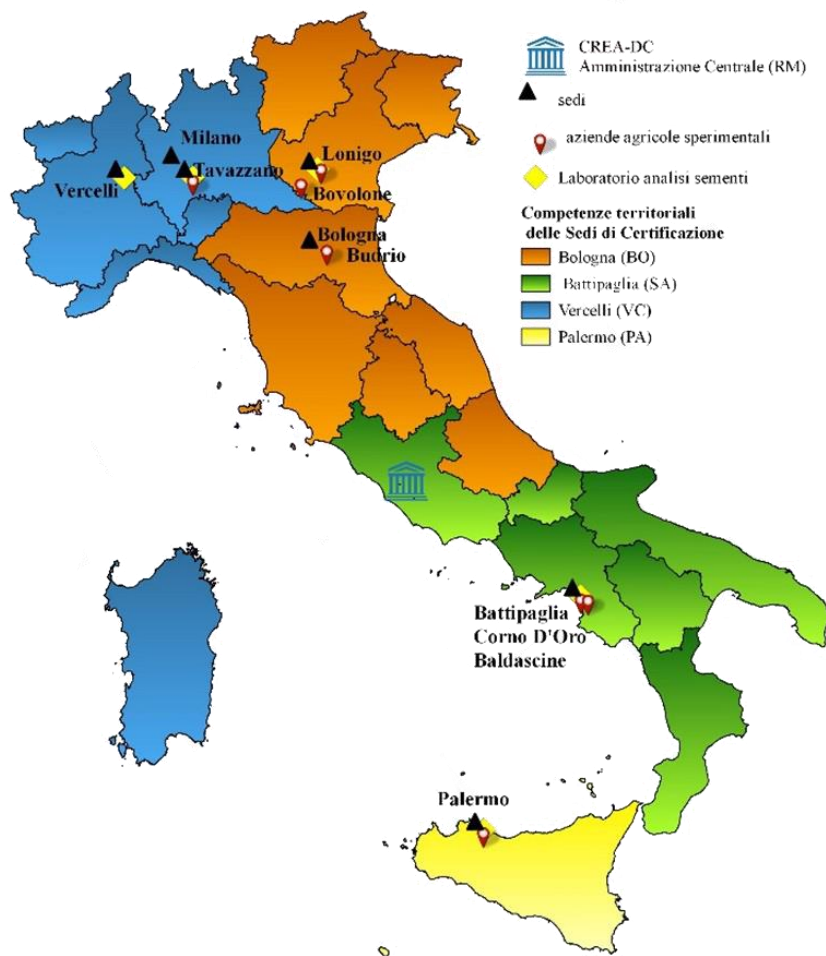
Another mission of the office is the management of experimental fields for the agronomic tests in the framework of evaluation of new plant varieties for listing in the National Catalogue. Lonigo office, on behalf of MIPAAF, is part of the **national network that manage field trials for cultivation and use value testing** of new plant varieties. Aim of the tests is the evaluation of agronomic and physiological characteristics, like resistance to biotic and abiotic stresses, yield potential and adaptability to different cultivation areas. Overall, every year, more than an hundred of new varieties of several species are tested (sunflower, soybean, wheat, sorghum, rapeseed, potato, hemp, tobacco and forage plants). In the scope of seed

certification and **post control tests**, every year more than 2000 field plots are tested to evaluate purity and varietal identity for vegetables and agricultural crops (chicory, carrot, soybean, sunflower and alfalfa).



Research and experimentation

The main research topics investigated in Lonigo office are plant varieties characterization, new technologies applied to seed quality testing and setup of new protocols aimed at the detection of seed-borne diseases. As part of agricultural experimentation it is engaged in the National Network of cultivated species for quality evaluation and crop production testing of varieties (soft wheat, triticale, barley and soybean).



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*Realizzazione a cura di Romana Bravi, Mauro Dal Prà, Cristian Gretter
 Lonigo, settembre 2022*