



THE PERFECT RESPONSE TO THE GROWING DEMAND FOR TECHNOLOGY, FROM THE AGRICULTURAL SECTOR

The **AGRO electronics** Business Unit of CBC Europe was created to respond to the growing demand for technology and informatization from the agricultural sector of the new millennium.

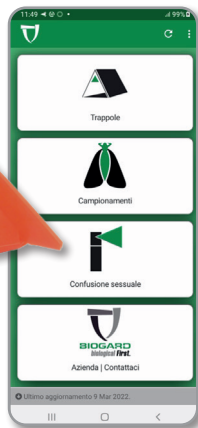
It brings together the skills acquired in the design and construction of electronic devices by the Electronics Division with the experience recognized by the market in the development and marketing of plant protection products for agriculture in the Biogard Division.

AGRO electronics is able to offer reliable commercial solutions that improve activities in multiple areas of applications.

Thanks to the continuous research, it makes available tools to support the activities that will be applied in the near future.



BIOGARD GIS



BIOGARD GIS is the software suite created to simplify and support the daily work of farmers and technicians.

- **Traps management**

Allows the geolocation of the traps installed in the field, simplifies the collection of catches number, analyzes and releases the collected data in a simple and intuitive way.

- **Positioning of dispensers**

Allows the calculation of the exact number of dispenser, manual or aerosol, to put in the field based on the crop and the product, suggests the points of the application in accordance with the cadastral maps, guides the farmer in the installation.

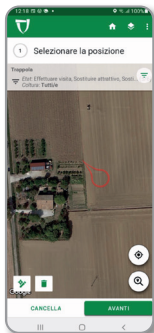
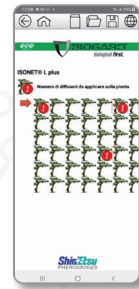
- **Damage assessment**

Allows the planning activities, guides the technician in the survey, simplifies data collection, analyzes and releases the collected data in a simple and intuitive way.

- **Data collection and management**

Allows the geolocation of sensors in the field, automates data collection, analyzes and releases the collected data in a simple and intuitive way.

Smart Dispenser (MISTER LoRa), Weather Stations, Smart Traps, Other Specific Sensors.



BIOTREMOLGY

SHINDO trap

Shindo Trap is the innovative trap developed for the capture of BMSB (*Halyomorpha halys*) which combines classic pheromone/kairomone attraction with new vibrational system.

Pentatomids communicate between individuals of the same species also with vibrational signals that are perceived through the plants on which they live and move. Frequencies and vibration sequences are specific for both sexes and species, this uniqueness allows them to recognize, locate and reproduce. The research conducted by the entomologists of the Edmund Mach Foundation of San Michele all'Adige allowed us to decode key portions of the vibrational language which, if effectively reproduced, generate the attraction towards the source of the target insect.

The research of CBC Agrotechnics engineers has led to the identification of the best method to reproduce the identified attractive vibrational signal in a continuous and constant way.

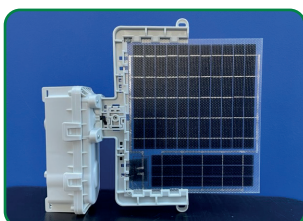
The joint FEM / CBC research focused on the faithful reproduction of the natural signal of the insect with particular attention to all secondary components.



TREMOS system

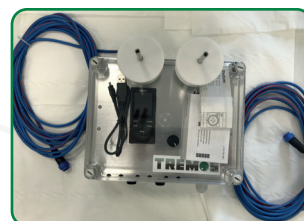
TREMOS is a system of emitters reproducing the communication language of each single target species and broadcasting it in a selected area. Each TREMOS emitter plays and broadcast species-specific signals, with interfere with the communication between sex and thus prevent or considerably delay their mating.

TREMOS emitter for field applications



Mating disruption
(*Scaphoideus titanus* -
Empoasca vitis)

TREMOS emitter for research applications



Scaphoideus
Empoasca vitis
Nesidiocoris tenuis
Aleurocanthus spiniferus

MISTER

Computerized aerosol dispenser system

Pre-programmed emitter, with temperature sensor, with number and frequency of spray predefined based on insect behavior and the crop of application.

- **Single-use:** To ensure the best performance and minimize reliability problems, MISTER is conceived for one season use only. At the beginning of every season the new emitter replaces the old one that must be disposed of.
- **Small size:** at the design stage, all individual components have been reduced in size as much as possible, to minimize waste.
- **Pre-programmed:** the emitter is pre-programmed to optimize every emission from the aerosol can in relation to climatic conditions.
- **Temperature sensor:** MISTER is equipped with a temperature sensor connected to the microcomputer. Based on the pre-selected program, its sensor allows to modulate the emissions.
- **LoRa version:** MISTER with real time connection



Tools

- Software
- Monitor
- Remote Control Programmer
- Programming Support For 12 Emitters
- Remote Control



DEVELOPMENTS

Continuous research and development on hardware and software to support field activities.

Smart Sensors

Sensors for the collection and transmission of data from the field to improve the timing of intervention.



Smart traps

Traps with camera and / or sensors for automatic catch counting.



UltraSound System

Innovative ultrasound system for monitoring the activities of ungulates, birds and other mammals that cause problems for crops.





The perfect response to the growing demand for technology,
from the agricultural sector

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