

# Survey programme in Lombardy

## criteria and tools for planning sampling and data collection

Mariangela Ciampitti & Francesca Siena

Categoria	COLTURA/OSPITI	ON	PERIODO	Provincia	N. SITI	HA	NOTE CAMPIONI	ON1	campioni ON1 da fare	ON2	campioni ON2 da fare	ON3	campioni ON3 da fare	TECNICI SFR INCARICATI	indice medio previsto	Giornate Previste
COLTURE CAMPO LAVORAZIONE	PATATA CENTRI LAVORAZIONE/RACCOLTA	CLAVIBACTER SEP., RALSTONIA S./PSEUDO/SYGYZI, SYNCHYTRIUM TOTALE	1° ctr metà giugno-settembre 2° ctr ottobre - novembre	TOTALE REG	4 SITI TOTALE		TUBERI (200 tuberi per campione): 6 campioni Clavibacter + 6 Synchytrium + 6 Ralstonia sol/pseudo/syg. (un unico campione può essere analizzato per tutti e 6 gli o.n.) ACQUE [AVVISARE LAB per CONSEGNA]: 20 campioni per Ralstonia sol/pseudo/syg	Clavibacter, Synchytrium, Ralstonia sol-pseudo-syg	6 CAMPIONI TOTALE TUBERI: campione unico 200 tuberi per tutti o.n.)	Ralstonia sol/pseudo/syg	20 CAMPIONI ACQUE TOTALE			TOTALE	nel 2022 4 gg	4 gg TOT
COLTURE PIENO CAMPO	POMODORO	BACTERICERA COCKERELLI, ToLCNDV, RALSTONIA S./PSEUDO/SYGYZI TOTALE	maggio - agosto	TOTALE REG	30 SITI ca. TOTALE	200 ha TOTALE	10 campioni ToLCNdV, 5 campioni Ralstonia sol-pseudo-syg; Bactericera cockerelli su sospetto	ToLCNdV	10 CAMPIONI TOTALE	Ralstonia sol-pseudo-syg	5 CAMPIONI TOTALE	Bactericera cockerelli	N.Q.	TOTALE	indice 2016 UE: 10ha/gg/persona	20 gg TOT
COLTURE PIENO CAMPO	POMODORO	BACTERICERA COCKERELLI TRAPPOLE TOTALE	giugno - agosto	TOTALE REG	3 SITI TRAP TOTALE		su sospetto (intera trappola cromotropica)	BACTERICERA	5 CAMPIONI TOTALE					TOTALE	1 gg/sito trap	3 gg TOT
COLTURE PIENO CAMPO	MAIS	PANTOEA, SPODOPTERA TOTALE	maggio - giugno (4°-5° foglia)	TOTALE REG	65 SITI ca. TOTALE	315 ha TOTALE	S.frugiperda: 10 campioni insetti; Pantoea: 50 campioni piante	Spodoptera frugiperda	10 CAMPIONI TOTALE	Pantoea	50 CAMPIONI TOTALE			TOTALE	indice 2023: 8,5 ha/gg	37,5 gg TOT
COLTURE PIENO CAMPO	MAIS	PANTOEA STELVETTORE TOTALE												TOTALE	4 siti/gg	6 gg TOT
COLTURE PIENO CAMPO	MAIS	SPODOPTERA FRUGIPERDA TOTALE												TOTALE	1,75 gg /sito trap	35 gg TOT
COLTURE PIENO CAMPO	RISO	POMACEA TOTALE												TOTALE	indice 2022 =5 gg	5 gg TOT
COLTURE PIENO CAMPO	RISO	MELOIDOGYNE SPODOPTERA FRUGIPERDA TOTALE												TOTALE	nel 2022 44 gg (38 Mel+6 Spod)	44 gg TOT
COLTURE PIENO CAMPO	RISO	MELOIDOGYNE (ZD) TOTALE												TOTALE	nel 2022 41 gg	40 gg TOT

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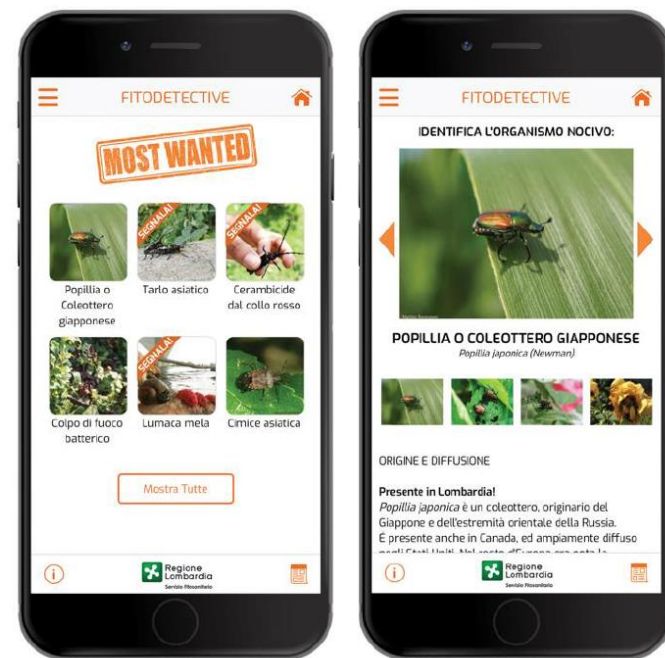
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# Tools for general surveillance

According to ISPM 6

- **general surveillance:**
  - public education and awareness raising initiatives
  - smartphone application **FitoDetective**
  - cooperative agreements (between PPS and stakeholders and scientific societies)



**1.200 reports** received from citizens/naturalists in 2022  
2.800 reports received in 2021

# Surveillance and survey design in Lombardy

2022	N. visual examinations	N. Samples sent to lab (excluding traps)	N. traps	N. hours employed
Free areas ( <b>70 pests</b> )	5800 ca	595	256	4875 ca
Demarcated area <i>Meloidogyne graminicola</i>	1150 ca	79	/	330 ca
Demarcated area <i>Aleurocanthus spiniferus</i>	105 ca	13	6	75 ca
Demarcated area <i>Aromia bungii</i>	4780 ca	36	12	2330 ca
Demarcated area <i>Anoplophora glabripennis</i>	9300 ca	7	27	5310 ca
Demarcated area <i>Anoplophora chinensis</i>	39040 ca	19	226	21080 ca
Demarcated area <i>Popillia japonica</i> (excluding Attract & Kill traps)	1510 ca	27	11	1760 ca



Regione  
Lombardia

Plant Protection Service

# Surveillance and survey design in Lombardy

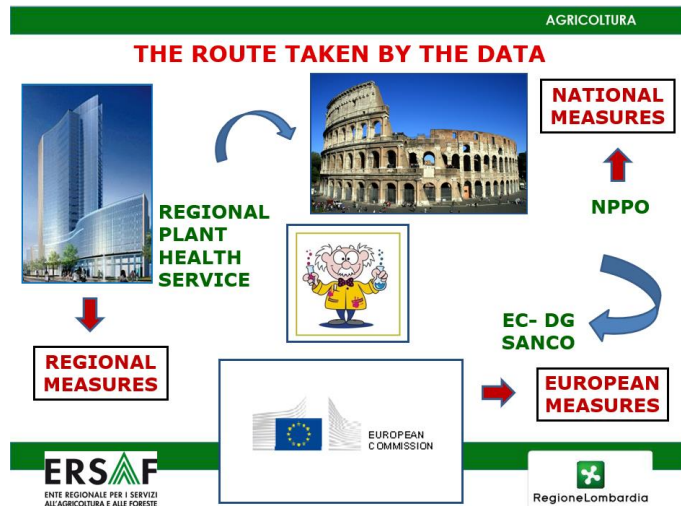
In Lombardy, surveillance planning has been risk-based and follows a pragmatic approach for more than 15 years

The risk assessment is carried out by a multidisciplinary team with experience in field inspections, nursery controls, import/export checks and with the constant support of the Plant Protection Service's laboratory technicians

Risk assessment is conducted on pest species, pathways, host crops and host plants, commodities, survey sites and sensitive areas

Finally, according to the priorities identified, a balance is made between surveillance needs and the availability of human and financial resources

EFSA/EPPO Workshop 2014

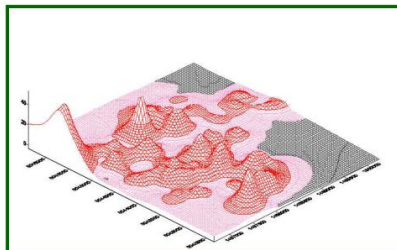


# Surveillance and survey design in Lombardy

AGRICOLTURA

## STRATEGIC PLANNING STEPS:

✓ **which data to collect:** data requested by DG SANCO and by NPPO, but also other data to develop control strategies or monitor their effectiveness (ex. *Anoplophora chinensis* N. of exit holes and sawdust per infested tree)



AGRICOLTURA

## STRATEGIC PLANNING STEPS:

✓ **how many:** n ha, n sites according to the importance of the crop in the area and of its GDP;

✓ **Who and time commitment:** n. days for inspectors, agents, technicians calculated on the basis of efficiency ratios that vary from crop to crop, but also from area to area (ex. if the ground is flat, hilly or terraced. We have developed performance indices based on real data recorded in recent years;



AGRICOLTURA

## STRATEGIC PLANNING STEPS:

✓ **how:** detailed protocols are processed on how to make the survey, which species to control (all host plants or those specified by an EC Emergency Decision or listed in EPPO standard or those most at risk) and which symptoms are to be checked

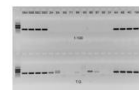
<i>Anoplophora glabripennis</i>	<i>Anoplophora glabripennis</i>	<i>Anoplophora glabripennis</i>
Genera listed by the Lombardy Regional Law	Genera listed by EPPO Standard PM 9/15	Genera listed by EC Decision
<i>Acer</i>	<i>Acer</i>	<i>Fraxinus</i>
<i>Betula</i>	<i>Betula</i>	<i>Morus</i>
<i>Salix</i>	<i>Salix</i>	<i>Platanus</i>
<i>Populus</i>	<i>Populus</i>	<i>Prunus</i>
<i>Ulmus</i>	<i>Ulmus</i>	<i>Pyrus</i>
	<i>Aesculus</i>	<i>Robinia</i>
	<i>Albizia</i>	<i>Sorbus</i>
	<i>Alnus</i>	<i>Sophora</i>
	<i>Carpinus</i>	<i>Fagus</i>

AGRICOLTURA

## STRATEGIC PLANNING STEPS:

✓ **when:** on a scientific basis, the timing depends on the cycle of the HO, the presence of symptoms, the expiry of the reporting

✓ **support tools:** GPS, laboratory analysis, pheromone or kairomones traps, binoculars, tree-climber, platform), etc.



# Annual planning at regional level

Survey site	Hosts	Pest	Period	Province	N. Sites	Hectars	N.traps	Kind of trap	trap Category	attractants field life	check period	pest1	Pest 1 - N.of Samples	pest 2	Pest 2 - N.of Samples	Pest 3	Pest 3 - N.of Samples	personal involved	average index	days work planned	Notes
FRUIT STOREHOUSE	Malus domestica e Pyrus domestica	BACTROCERA DORSALIS e ZONATA TRAPS (LOMBARDY REGION TOTAL)	may - october	TOTAL	2 TRAP SITES TOTAL		2 TRAP TOTAL	mcphail + metyl eugenolon (Stessa trappola per entrambi gli o.n.)	Bait trap	90 days	14 days	BACTROCERA DORSALIS E ZONATA	N.Q.						average index: 1,5 day/trap	3 TOTAL day	
ORCHARD	Malus domestica e Pyrus domestica	ERWINIA AMYLOVORA (LOMBARDY REGION TOTAL)	may -july + august-november	TOTAL	8 SITES c.a.	N.Q.						ERWINIA	N.Q.						in 2022 7,3 day	9 TOTAL days	
ORCHARD	Malus domestica e Pyrus domestica	PHYLOSTICTA SOLITARIA (LOMBARDY REGION TOTAL)	july - october	TOTAL	20 SITES	N.Q.						PHYLOSTICTA SOLITARIA	2 SAMPLES TOT							see above	
ORCHARD	Malus domestica	RHAGOLETIS POMONELLA TRAPS (LOMBARDY REGION TOTAL)	mid- june - august	TOTAL	3 TRAP SITES TOTAL		3 TRAP TOTAL	rebell con cromo + attrattivo specifico	Bait trap	4/6 sett	14 days	RHAGOLETIS POMONELLA	10 SAMPLES TOT						index 2022 0,8 day/trap	2,5 TOTAL days	
ORCHARD	Malus domestica	GRAPHOLITA PRUNIVORA TRAPS (LOMBARDY REGION TOTAL)	mid- june - august	TOTAL	3 TRAP SITES TOTAL		3 TRAP TOTAL	buckett + attrattivo specifico	Pheromone trap	60 days	14 days	GRAPHOLITA PRUNIVORA	5 SAMPLES TOT							1 TOTAL days	
ORCHARD	Malus domestica e Pyrus domestica	BACTROCERA DORSALIS e ZONATA TRAPS (LOMBARDY REGION TOTAL)	mid- june - august	TOTAL	2 TRAP SITES TOTAL		2 TRAP TOTAL	mcphail + metyl eugenolon (Stessa trappola per entrambi gli o.n.)	Bait trap	90 days	14 days	BACTROCERA DORSALIS E ZONATA	N.Q.							2 TOTAL days	
ORCHARD	Olea europea	XYLELLA FASTIDIOSA (LOMBARDY REGION TOTAL)	may - august	TOTAL	30 SITES	30 ha ca TOTAL						XYLELLA	30 SAMPLES TOT						in 2022 7 day (4 sites/day)	7 TOTAL days	

AVERAGE INDEX

DAYS PLANNED

# Province-level planning breakdown (12 provinces)

Survey site	Hosts	Pest	Period	Province	N. Sites	Hectars	N.traps	Kind of trap	trap Category	attractants field life	check period	pest1	Pest 1 - N.of Samples	pest 2	Pest 2 - N.of Samples	Pest 3	Pest 3 - N.of Samples	personal involved	average index	days of work planned
FIELD	Zea mays	PANTOEA, SPODOPTERA (LOMBARDY REGION TOTAL)	may - june (4°-5°leaf)	TOTAL	65 SITES c.a. TOTAL	315 ha TOTAL						Spodoptera frugiperda	10 SAMPLES TOT	Pantoea	50 SAMPLES				index 2023: 8,5 ha/day	37,5 TOTAL days
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	CO/VA	2	7,5						S.frugiperda: samples of larvae	1	Pantoea: plant samples	3			SIENA//DE STEFANO		1,0
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	LC/MB	2	7,5						S.frugiperda: samples of larvae	1	Pantoea	3			BATTAGLIA/GALIMBERTI/SALA		1,0
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	BG	5	25						S.frugiperda: samples of larvae	1	Pantoea	5			INVERARDI/AFRIC/SALA (OTD)		3,0
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	BS	15	75						S.frugiperda: samples of larvae	3	Pantoea	8			MENSI/TONNI/OTD (Di Giovanbattista?)		9,0
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	CR	10	50						S.frugiperda: samples of larvae	2	Pantoea	7			BOCCHIO/BONDI/RAGAZZI?		6,0
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	LO	6	30						S.frugiperda: samples of larvae	2	Pantoea	5			GATTI/SCALZOTTO		3,5
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	MI	6	30						S.frugiperda: samples of larvae	2	Pantoea	5			GALIMBERTI/CANTATORE/COBIANCHI/CATTANEO/		3,5
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	MN	12	55						S.frugiperda: samples of larvae	2	Pantoea	5			PREUS/ALLEGRETTI/MICHELOTTI/OTD		6,5
FIELD	Zea mays	PANTOEA, SPODOPTERA	may - june (4°-5°leaf)	PV	7	35						S.frugiperda: samples of larvae	2	Pantoea	5			POGGI (SCALZOTTO)		4,0
FIELD	Zea mays	SPODOPTERA FRUGIPERDA e HELICOVERPA ZEA TRAPS (LOMBARDY REGION TOTAL)	june - september	TOTAL	20 TRAP SITES c.a.		40 TRAP SPO + 40 TRAP HELI	Spodoptera: buckett + attr. specifico; Helicoverpa: buckett+ attr. specifico	S.f.: Pheromone trap; H.z.: Pheromone trap;	S.f.: 40 days; H.z.: 40 days	14 days	Spodoptera frugiperda	20 SAMPLES TOT	Helicoverpa	10 CAMPIONI TOTALE				1,75 day /sito trap	35 TOTAL days
FIELD	Zea mays	SPODOPTERA FRUGIPERDA e HELICOVERPA ZEA TRAPS	june - september	BG	1		2 Spodoptera + 2 Helicoverpa	Spodoptera: buckett + attr. specifico; Helicoverpa: buckett+ attr. specifico	S.f.: Pheromone trap; H.z.: Pheromone trap;	S.f.: 40 days; H.z.: 40 days	14 days	Spodoptera	1	Helicoverpa	1			AFRIC/INVERARDI		1,75
FIELD	Zea mays	SPODOPTERA FRUGIPERDA e HELICOVERPA ZEA TRAPS	june - september	BS	3		6 Spodoptera + 6 Helicoverpa	Spodoptera: buckett + attr. specifico; Helicoverpa: buckett+ attr. specifico	S.f.: Pheromone trap; H.z.: Pheromone trap;	S.f.: 40 days; H.z.: 40 days	14 days	Spodoptera	1	Helicoverpa	1			TONNI/MENSI, BERTINI/BOCCHIO		5,25

# Tools for specific surveillance



According to ISPM 6

- **specific surveillance:**
  - detection survey in PFA
  - delimiting survey in DA
  - (monitoring survey in IA)



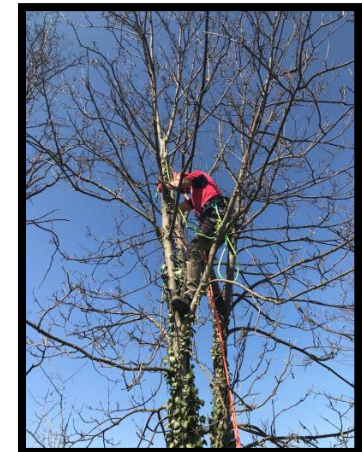
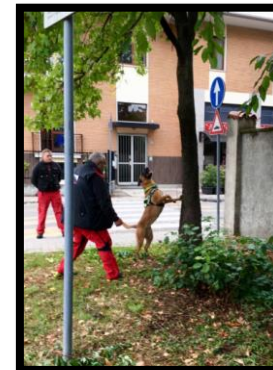
Regione  
Lombardia

Plant Protection Service



# Tools for specific surveillance

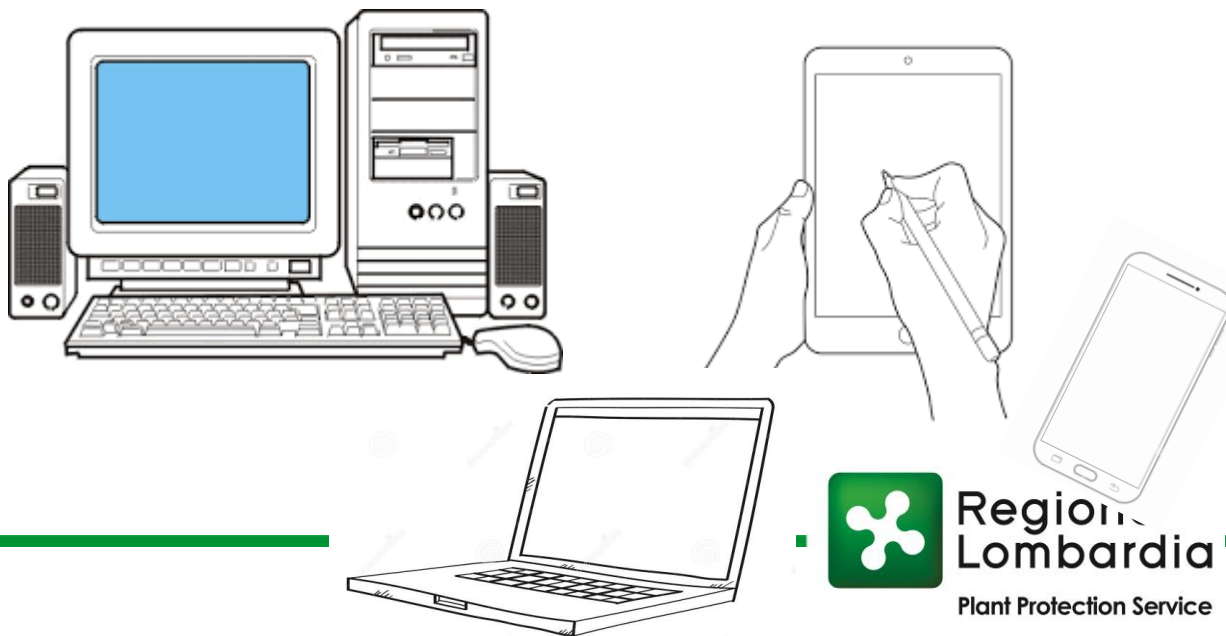
	<i>Anoplophora chinensis</i>	<i>Anoplophora glabripennis</i>	<i>Aromia bungii</i>
Binocular			
Platform basket			
Sniffer dogs			
Traps			Again, new lures!
Tree climbers			
Sentinel trees	No more	No more	
IT tool MORGANA			
Lab testing			



# Data collection tool

Software (web application) «MORGANA» (Ex «INDAGO»)

- Morgana is an on-line application: it is not necessary to download any software
- Morgana is accessible by pc/tablet/smartphone/....
- Morgana can be accessed with a personal username and password



# Data collection tool

## 2. Tools to collect all field survey data (in the field)



# Data collection tool

## PHILOSOPHY and STRUCTURE

Based on 3 different types of field activities during the surveys

```
graph TD; A[VISUAL INSPECTION]; B[SAMPLE TAKING]; C[TRAP MANAGEMENT (TRAPPING)]; B --> D[sample information is displayed in the Laboratory section (sample code- target organism)];
```

VISUAL  
INSPECTION

SAMPLE TAKING

TRAP MANAGEMENT  
(TRAPPING)

sample information is displayed in the Laboratory  
section (sample code- target organism)

# Data collection tool

## 4 types/roles of USERS

### FIELD USER/FIELD DETECTOR

#### «Rilevatore»

- Carries out field surveys
- Records data

### DATA MANAGER

#### «Gestore»

- Carries out field surveys
- Records data
- Manages data
- Controls data
- Corrects data
- Exports data

### ADMINISTRATOR

#### «Amministratore»

- Carries out field surveys
- Records data
- Manages data
- Controls data
- Corrects data
- Exports data
- Enables users
- Deletes wrong data
- Adds analysis and results

### LABORATORY «lab user»

- Adds analysis and results (tests/numbers/results of analysis performed for each individual sample recorded on database)



FINAL RESULT OF SURVEY in case of sampling

Complete history of a single survey is stored on MORGANA database

All the data for EU reports can be exported from MORGANA database on required format

# Data collection tool

## DATA RECORDED at EVERY SURVEY (action)

### DAILY WORK

- day/month/year
- Name of the person carrying out the survey
- Time (spent in the field and travel time)

### SURVEY - ACTION

- Location (province/municipalities/address)
- GPS coordinates
- Survey site (kind of location according to EU Reg.n.1231/2020 – field/orchard or vineyard/forest/public site/private garden/nursery/entry point....)
- Organism inspected
- Species inspected
- Quantities inspected (hectars or n.of plants)
- Target material inspected (plants/woods/seeds/tubers/soil/...)
- Owner information (name/address/e-mail/phone number/vat number /....)
- Pest status of inspected site (infested area/buffer zone/ pest free area)
- Co-funded inspection (yes or no)

### SURVEY - ACTION

- N. of plants with symptoms
- Official report number
- Attachments (official reports/pictures...)
- Sample code
- Sample information like kind of material sampled (leaf/fruit/branch/soil/insect/... ), number of individuals in the sample (n. of insects/pool of plants...), notes for the laboratory
- Type of symptoms (symptomatic/asymptomatic/not specific symptoms)
- Type of trap used (multifunnel/cross vane/pagoda/pitfall/rebell...)
- Category of trap (pheromone/bait/flight interception/sticky trap)
- Installation/control/pheromone exchange/re-installation

# Data collection tool

## ALLOCATION of DAILY WORKING TIME for INDIVIDUAL SURVEY ACTION for EACH PEST

Once the daily time worked (field work + travel time) is recorded, the system automatically divides the total time by assigning a quote to each individual action of each pest considered

Example:

- 3 hours of field work in a tomato field crop + 1 hour of travel time= 4 hours of **daily work**
- **survey actions** carried out:
  - 1 visual inspection for *ToLCNDV*,
  - 1 visual inspection for *Ralstonia solanacearum*
  - 1 visual inspection for *Bactericera cockerelli*
  - 1 sampling for *Ralstonia solanacearum*

TIME ALLOCATED BY THE SYSTEM to each survey action = 1 hour (4 hours/4 actions)

so:

- 2 hours for *Ralstonia solanacearum* (1 visual + 1 sampling)
- 1 hour for *ToLCNDV*
- 1 hour for *Bactericera*

# Processing and reporting tool

## 3. Tool for managing and processing collected data (in office)

**MORGANA**  
Monitoraggio ORGANISMI Nocivi in Agricoltura

- Home >
- Lavori >
- Geocalizzazioni >
- Proprietari >
- Esportazioni >

### Tip report

- Dati v3 : esportazione di tutti i dati in formato xlsx

Data inizio: 01/01/2022

Data fine: gg/mm/2022

Stato Lavoro: - stato -

Tipologia Azione: Nessun Selezionato

Organismo nocivo: Spodoptera frugiperda

Survey Sites: Nessun Selezionato

Specie controllata: - specie controllata -

Provincia: - provincia -

Comune: - comune -

Id Lavoro: id Lavoro

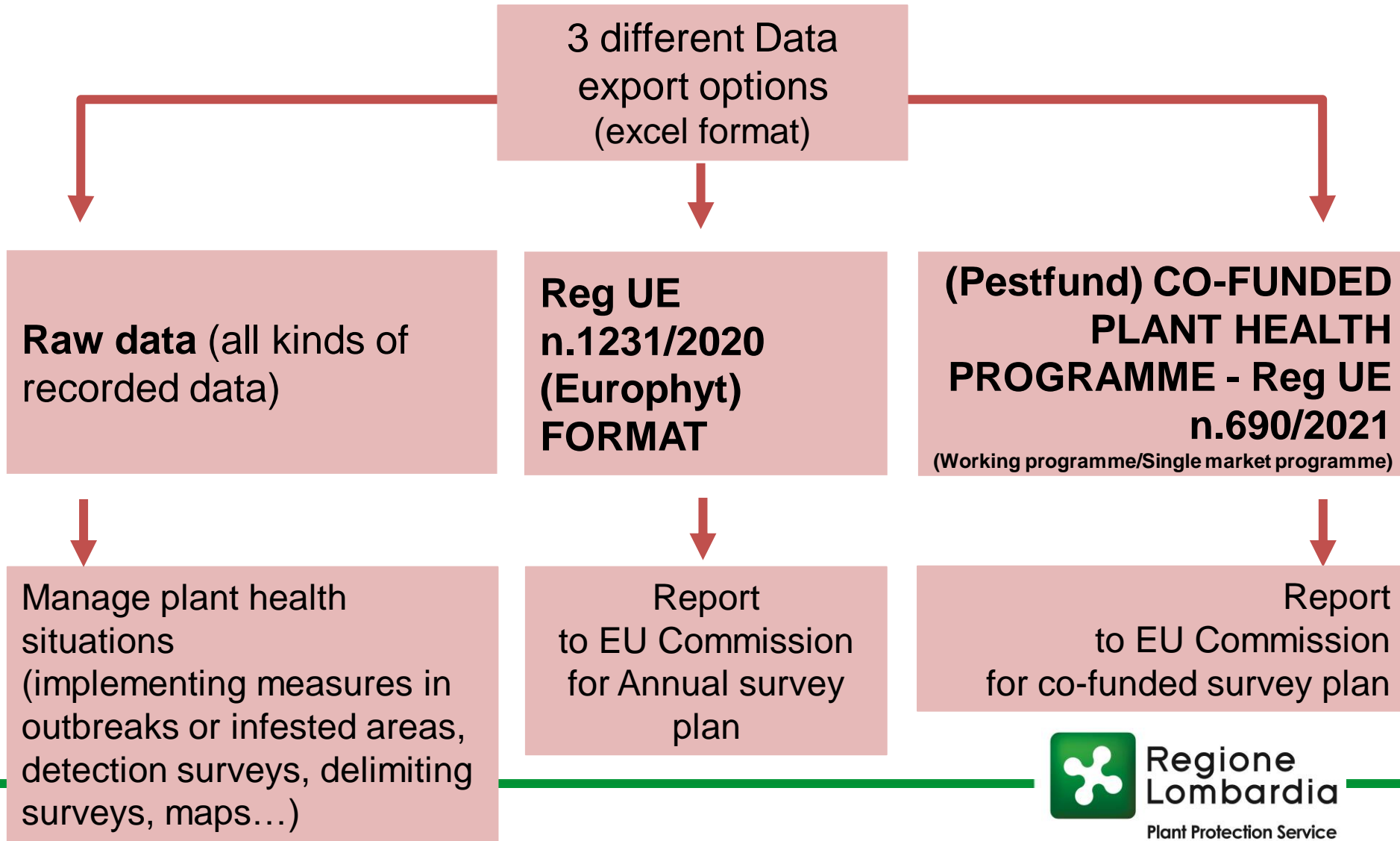
Data export  
(Excel format)

Tipo azione	Tecnici	Esito Azione	Stato azione	Provincia	Comune	Indirizzo	ID GPS	Latitudine Gps	Longitudine Gps	Pubblico/Private	Ragione sociale Proprietario	CUAA Proprietario	Indirizzo Proprietario	Target material	Organismo nocivo	Location	Tipologia specifica siti
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4UY	45.032023266	10.382678303	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4UJ2	45.039489557	10.3836760948	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J20	45.0378986709	10.38464168	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J22	45.0380059106	10.383287221	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J23	45.0381043687	10.3831289142	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J24	45.0380664619	10.3819732329	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J25	45.038051239	10.3823349803	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J27	45.0377836882	10.3819487422	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J28	45.0377328796	10.3829894393	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J29	45.0376780095	10.3833013204	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2B	45.0376033951	10.3824523975	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2C	45.0376849724	10.3814230232	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220527-G-4JMC	45.0373196899	10.3835956395	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2D	45.0369216603	10.3835258811	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2F	45.0365425819	10.3834619081	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2G	45.036180102	10.3833864082	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2H	45.0365834373	10.3833220332	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2I	45.0371036171	10.3857836655	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2K	45.0367624477	10.3857252525	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2L	45.036406131	10.3855609395	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2M	45.0360487763	10.3855985464	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2N	45.0359573979	10.385137488	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2O	45.0363909459	10.385867293	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2P	45.0368216603	10.3852103084	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)
Visual Inspection	Bocchio RL Marco, Bondi FL Alberto	Negativo	Chiuso	19 Cremona (CR)	19057 Martignana di Po	Strada Asolana	LOM-220531-G-4J2R	45.0372400842	10.3847704261	Privato - Azienda agricola	Az. Ag. Bernardi Matteo	01337290197	SP 343 Asolana	Plant	LAPHFR - Spodoptera frugiperda	11Field (arable, pasture)	altre foraggere (mais, soia...)



# Data processing and reporting Tool

## 3. Tool for managing and processing collected data (on office)



Regione  
Lombardia

Plant Protection Service

# Data processing and planning tool

## 3. Tool for managing and processing collected data (in office)

possibility of exporting data by

Pest

Kind of action  
(Visual/Sampling/Trapping)

Technician involved

...

USEFUL INFORMATION for making our Regional Plant Protection Annual Plan (average time for field inspection, trap management, total working time for each individual technician)

*Thank you for your attention*



For more information:

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Plant Protection Service