

Implementation and validation of innovative insect-protection methods to increase environmental sustainability of corn production

Riferimenti

Tipo di progetto

Gruppo Operativo

Acronimo

DifesaMais

Tematica

Agricoltura biologica

Information

Time frame

2016 - 2019

Durata

36 months

Partners (no.)

12

Regione

Emilia-Romagna

Comparto

Cerealicoltura

Localizzazione

ITH55 - Bologna

Costo totale

€346.458,39

Fonte di finanziamento principale

Programma di sviluppo rurale

Programma di sviluppo rurale

2014IT06RDRP003: Italy - Rural Development

Programme (Regional) - Emilia Romagna

Parole chiave

Pest /disease control

Farming practice

Sito web

<https://progeo-fertirrigazione.it/>

Project status

completed



Objectives

The main aim of this project is to increase the sustainability of corn cultivation in Emilia Romagna region, by the development of innovative technologies of insect protection, characterized by low environmental impact, and evaluated by a precise quantification of input reduction

Results

The final results are the following:

- 1) Transparent biodegradable plastic cover displayed: any reduction in herbicide use; less soil leaching with subsequent reduction of nitrogen losses; less greenhouse gas production; strong reduction of environmental impact of irrigation (100%).
 - 2) Fertirrigation: reduction of water in comparison to strategies irrigated by travelling gun irrigation system (30 mm corresponding to 25% reduction).
 - 3) Black biodegradable plastic cover: same results obtained with the use of the transparent biodegradable plastic cover, but with a reduction of 100% of herbicides.
 - 4) EPD fertilizer: less environmental impact in comparison with urea (up to 67% of greenhouse gas reduction), reduction of both non-renewable and renewable resources by 49% to 68% respectively.
- Finally, also acidification and eutrophication were reduced of 66%.

Activities

The main activities are:

- a) Development and validation of technologies for European corn borer

control, including a comparative analysis of the ecological sustainability of the different practices;

b) Individuation of sustainable procedures to minimize or avoid the aflatoxin contamination, by means a bio-competition approach based on the use of non-aflatoxigenic strains of *Aspergillus flavus*;

c) Validation of a monitoring plan on a macro-scale area to prevent wireworms infestation.

The project will be completed with the coordination activity of the Operational Group, and by a dissemination plan program (video, meeting, Web App, guideline).

Partenariato

Role	Azienda	Address	Telephone	E-mail
Leader	PROGEO Società Cooperativa Agricola	Via Asseverati 1 42122 Reggio Emilia RE Italy	0522 346411	info@progeo.net
Partner	AGRITES	Via Marconi 4/2 40057 Granarolo Dell'Emilia BO Italy	051 6067060	albertini.intesia@agrites.it
Partner	Dipartimento di Scienze e Tecnologie Agro-Alimentari - DISTAL Università di Bologna	Viale Fanin 44 40127 Bologna BO Italy	051 2096240	distal.amm.dipartimento.respammgest@unibo.it
Partner	Azienda Agricola Marabini Aurelio	Via Cartara 1484 40024 Castel San Pietro Terme BO Italy	051 6953549	

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<https://www.innovarurale.it/pei-agri/gruppi-operativi/bancadati-go-pei/messa-punto-di-tecniche-innovative-di-difesa-ad-elevata>

Role	Azienda	Address	Telephone	E-mail
Partner	Azienda Agricola Trigari Nadia	Via 2 Agosto 35 40057 Granarolo dell'Emilia BO Italy	051 787161	nadia.trigari@cia.legalmail.it
Partner	Cà Selvatica Società Agricola	Via Guidotti 45/3 40134 Bologna BO Italy	051 963182	caselvatica@pec.confagricoltura.com
Partner	Centro Agricoltura Ambiente Giorgio Nicoli	Via Sant'Agata, 835 40014 Crevalcore BO Italy	051 6802211	presidente@caa.it
Partner	Condifesa Bologna e Ferrara	Via Vene di Bellocchio 14 44124 Ferrara FE Italy	0532 63690	condifesaferarra@condifesaferarra.it
Partner	Fondo San Luca di De Franceschi	Via Vanotto 15 40053 Valsamoggia Crespellano BO Italy	051 964431	defranceschistefano@pec.confartigianato.it
Partner	Futura	Via Bologna 96/e 40017 San Giovanni in Persiceto BO Italy	051 6811411	info-spc@cfp-futura.it
Partner	Società Agricola Scavazza Eludia Verucchi Achille S.S.	Via Bosi 3/A 40011 Anzola dell'Emilia BO Italy	051 734108	scavazzaverucchi@cenaspec.it

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Role	Azienda	Address	Telephone	E-mail
Partner	Università degli Studi di Parma - Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale	Parco Area delle Scienze 11/A 43124 Parma PR Italy	0521 905631	dip.scvsa@unipr.it

Pratiche abstract

Description

The expected results of this project is the creation of an innovative decision making model, characterized by high environmental sustainability, in order to implement the organic/integrated production of corn. The main stakeholders are the farmers (partners) belonging to PROGEO S.C.A. and, more generally, all the farms which will have the opportunity to acquire the economic expertise and the technical tools to implement an ecologically sustainable maize cultivation by a reduction of chemical inputs. Moreover, positive effects are expected to the whole corn food-chain, by improving the efficiency of production according to the concept of sustainability.

Further positive effects are expected on the conservation of biodiversity, including insect beneficials, by the reduction of pesticides for European Corn Borer and wireworm control.

Another positive effect on health consumers is also expected. In addition, the corn-feeds obtained without pesticide residues will positively affect the sustainability of the agro-food market, improving the biodiversity and the quality of the rural landscape.

Link utili

Titolo/Descrizione	Url	Tipologia
sito web del progetto	https://progeo-fertirrigazione.it/	Sito web
Sito web del capofila Progeo	https://www.progeo.net/index.html	Link ad altri siti che ospitano informazioni del progetto
Canale YouTube del progetto	https://www.youtube.com/channel/UCRf8lwOkeUN6YaHwbVuKjRw/videos	Altro