

BIOFRUITNET

BOOSTING INNOVATION IN ORGANIC FRUIT PRODUCTION THROUGH STRONGER NETWORKS

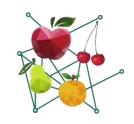
BIOFRUIT CONGRESS. 6TH OCTOBER 2022

EVELYNE ALCÁZAR MARÍN. INTERNATIONAL MANAGER. ECOVALIA ASSOCIATION









As perennial crop, organic fruit cultivation is one of the most difficult farming activities, since there are a set of specific problems which cannot be solved using conventional approaches

- Losses due to pest and diseases
- Difficult management of tree nutrition
- Lack of information on the suitability of varieties for organic fruit production
- Lack of accessible information, especially for new organic farmers, and a very fragmented knowledge base across the EU.

Countries involved





Objectives

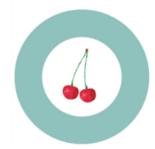




Collect, compile, translate and disseminate the knowledge across Europe











Practice abstracts



Videos



E-learning

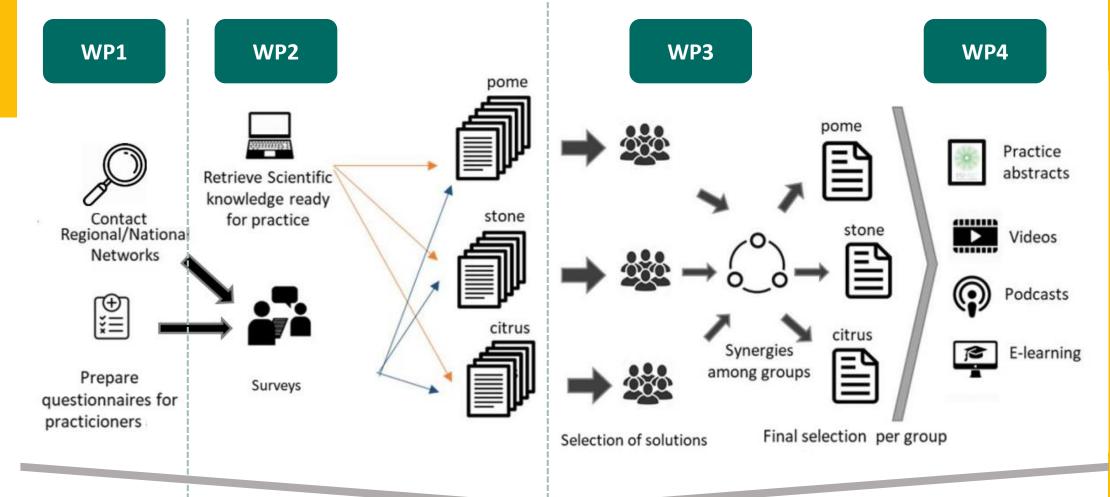


Podcasts



Methodology





WP5













Practice abstracts

What are practice abstracts?

- Short summary of practical information and recommendations.
- The format is very visual and attractive.
- It uses direct and easy-to-understand language.
- Avoids highly technical, researchoriented aspects.
- → max. 2 pages and 1500 characters (w/o spaces)





PRACTICE ABSTRACT



Vibrations to manipulate pest behaviours: new frontiers in pest control

Many insect pests do not (or partially) rely on odour for finding a mate, so pheromones and other chemi-

ing of these species and can provide effective and

The use of VS for pest cont tions, are safe (for humans a

VS can be used to ma such as landing on the

- important fruit groves (i.e., apple, pear and nut or strategic spots in the field and will soon be available
- tainable control techniques compatible with other deed, farmers should stay tuned and keep in contac



Crop production, environment and societ

Global, Mediterranean basis Application time

uring the cropping season but may depend on the

ing (Picture 1). Moreover, vs go not narm per eficial insects as they are tailored to a specific

- VS can be applied within any crop by installing poles and wires connected to the VS exciter and a

- VS devices can be set up in the orchard either de no
- Vibrational devices will soon be integrated into the

PRACTICE ABSTRACT



 Polainar, J., Eriksson, A., Lucchi, A., Anfora, G., Virant-Doberlet, M. and Mazzoni, V. (2015). Manipu lating behaviour with substrate-borne vibrations - potential for insect pest control. Pest. Manag. Sci. 71: 15-23. https://doi.org/10.1002/ps.3848

- . Check the Organic Farm Knowledge platform for more practical recommendation:
- Vibrational mating disruption for grape leafhoppers control. AGRO electronics









Vibrations to manipulate pest behaviours: new frontiers in pest control

Problem

Many insect pests do not (or partially) rely on odours for finding a mate, so pheromones and other chemical stimuli are ineffective for their management.

Solution

Vibrational signals (VS) play a crucial role in the mating of these species and can provide effective and sustainable control strategies to manipulate pest behaviours.

Benefits

The use of VS for pest control reduce pest populations, are safe (for humans and ecosystems) and are well-accepted by consumers.

Practical recommendation

 VS can be used to manipulate pest behaviours such as landing on the plant, mating, and feeding (Picture 1). Moreover, VS do not harm beneficial insects as they are tailored to a specific pest.

Applicability box

Theme

Crop production, environment and society

Context

Global, Mediterranean basin

Application time

During the cropping season but may depend on the species and scenario

Required time

From six months to one year

Period of impact

Less than one year

Equipment

Vibrational devices (i.e., piezo-buzzers, metal wires, exciters, trellis systems, etc.)

Best in

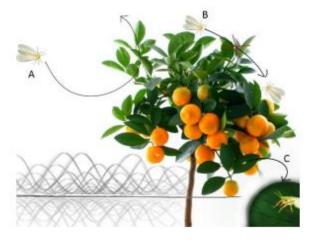
Cropping systems ravaged by pests communicating by means of vibrations (i.e., hemipterans but not exclusively)

- VS mating disruption is a feasible control against grapevine leafhoppers, given that trellis systems are excellent for transmitting vibrations.
- VS can be applied within any crop by installing poles and wires connected to the VS exciter and a solar panel as an energy source (Picture 2).
- Novel VS pest control strategies for citrus groves are under development at CIHEAM Bari. VS are transmitted to plants by wires to reduce mating and settling of the whitefly pest Alerocanthus spiniferus.
- A VS trap is under development for monitoring the stinkbug Halyomorpha halys within economically important fruit groves (i.e., apple, pear and nut orchards). The device only needs to be placed in strategic spots in the field and will soon be available on the market.
- VS devices can be set up in the orchard either de novo or by adjusting the system according to farmers' needs.
- Vibrational devices will soon be integrated into the farmers' toolbox for pest control, providing sustainable control techniques compatible with other organic approaches (i.e., biocontrol agents). Indeed, farmers should stay tuned and keep in contact with VS pest control providers.





PRACTICE ABSTRACT







Picture 1: Vibrational approaches for pest management. A) VS to reduce Picture 2: A) Device transmitting VS along the vibrational pest landing and permanence on the plant; B) vibrational mating disrup- vineyard set in northern Italy to control grapevine leafhoption; C) vibrational disruption of feeding behaviours. Credit: Sabina pers; B) Solar panels providing energy to the vibrational de-Avosani, CIHEAM Bari.

vices. Credit: Fondazione Edmund Mach and Biogard® (Italy).

Further information

Further reading

 Polajnar, J., Eriksson, A., Lucchi, A., Anfora, G., Virant-Doberlet, M. and Mazzoni, V. (2015). Manipulating behaviour with substrate-borne vibrations - potential for insect pest control. Pest. Manag. Sci., 71: 15-23. https://doi.org/10.1002/ps.3848

Weblinks

- Check the Organic Farm Knowledge platform for more practical recommendations.
- Vibrational mating disruption for grape leafhoppers control. AGRO electronics.

About this practice abstract and CIHEAM Bari

Publisher: CIHEAM Bari Address: Via Ceglie 9 - 70010 Valenzano (BA) -ITALY Phone: +39 080 4606259

Website: www.iamb.it

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Review: Ambra De Simone (IFOAM Organics Europe), Lauren Dietemann

Permalink: Organic-farmknowledge.org/tool/43572 Project website: https://biofruitnet.eu

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Drosophila suzukii control: Preventive measures in organic stone fruit orchards

Applicability box

Keywords

Context

Period of impact

Crop production, Horticulture

grated pest management

Stone fruit production areas

Temperate fruits, stone fruits, pest control, inte-

During colour change of fruits until end of harvest

Problem

The spotted wing drosophila Drosophila suzukii is an invasive pest attacking soft fruit species (berries, cherries, plums, grapes), as well as many wild berry plants. D. suzukii female adults lay eggs into the fruits from which larvae develop.

Solution

The control strategy of D. suzukii includes preventive measures1 such as orchard management, field hygiene, and choice of cultivar.

Benefits

The combination of preventive measures and intervention measures can reduce D. suzukii puncture and/or the development of larvae inside the fruits, and therefore minimise fruit and economical losses.

Practical recommendation

- Monitoring: Once the fruits begin to change colour from yellow to red until harvest, monitor D. suzukii presence weekly using bait traps1. Mount monitoring traps in shady, protected places and check weekly during the flight season from April until the end of the harvest. Males can be identified by dark wing spots visible to the naked eye (Picture1). In females, the large, curved ovipositor with well-developed, dark saw teeth can be seen with a magnifying glass.
- Fruit inspection: Inspect 50 externally intact random fruits with a magnifying glass. Check for egg deposition and puncture holes, and egg deposition with typical egg filaments that stand out from the fruit (Picture 2).
- Orchard management (+++): D. suzukii likes humid, shady, wind-protected locations. Dry and hot weather is unfavourable. Implement measures that lead to a dry orchard climate. Choose pruning systems that ensure a wellaerated, rapidly drying stand; mulch the undergrowth frequently or lay black mulch film; adjust irrigation intensity to avoid puddles.

(+++) essential measure

(++) good efficacy

(+) only in combination with other measures

- Hygiene and harvest (++): In case of high infestation pressure, harvest all cherries in one cycle (and dispose of the unripe fruits), as the second harvest cycle is usually heavily infested and often no longer marketable. Completely harvest early varieties, remove and destroy overripe and damaged fruit (put them in an airtight container) to avoid a D. suzukii proliferation. Immediately cool the harvested fruit to 0-3 °C to stop larval development. Keep the cold chain until delivery to consumers.
- Choice of cultivar (+): There are some cultivar differences for apricots and plums, while with cherries all varieties are attractive.





PRACTICE ABSTRACT



Picture 1: Female (2-3 mm long, left) and male (2 mm long, characteristic two spots on the wings, right) D. suzukii. Photo: C. Daniel (FiBL)



Picture 2: Oviposition of D. suzukii (right) and typical white filaments from an egg embedded in the fruit body (left). Foto: C. Daniel, F. Cahenzli

Further information

Weblinks

- 1. Cahenzli, F., Boutry, C. 2022. Practice abstract: Drosophila suzukii Control: Intervention in organic stone fruit orchards. FIBL. BIOFRUITNET.
- 2. Article on Drosophila suzukii (in German) on the farmer platform Bioaktuell.ch
- Daniel, C., Schnieper, S. and Baroffio, C. (Ed.) 2013. Kirschessigfliege Drosophila suzukii: Ein neuer Schädling im Weichobstanbau. Merkblatt. Proceedings on: Liebegger Tag der Spezialkulturen. Frick. Switzerland. 31.05.2013.
- Info material on Drosophila suzukii by Agroscope
- Stäheli, N., Dekumbis, V., Bouraoui, D., Egger, B., Mazzi, D. 2020. Kirschessigfliege Drosophila suzukii Identifikation, Ed. Agroscope, Wädenswil, Merkblatt 126, Dezember, 2020, 2 S.
- 6. Mazzi, D., Kehrli, P., Egger, B., Christ, B., Collatz, J., Daniel, C. 2021. F&E Task Force Kirschessigfliege -Schlussbericht. Agroscope. Februar, 2021, 41 S.
- 7. Stäheli, N., Egger, B., Kehrli, P., Mazzi, D., Linder, C. 2020. Bekämpfungsstrategie gegen Drosophila suzukii in Steinobstkulturen. Ed. Agroscope, Wädenswil. Merkblatt 114, April, 2020, 2 S.

About this practice abstract

Publisher: Research Institute of Organic Agriculture FiBL Ackerstrasse 113, Box 219, CH-5070 Frick +41 62 865 72 72, info.suisse@fibl.org, www.fibl.org

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Review: Ambra De Simone (IFOAM Organics Europe), Lauren Dietemann

Permalink: Organic-farmknowledge.org/tool/44167

Project name: BIOFRUITNET- Boosting Innovation in ORGANIC FRUIT production through stronger networks

Project website: https://biofruitnet.eu

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PRACTICE ABSTRACT

Apple scab (*Venturia inaequalis*): Preventive measures in organic pome fruit production

Problem

Apple scab (*V. inaequalis*) is the main fungal disease in organic pome production. It affects apple quality and leads to significant yield losses.

Solution

There are effective preventive measures to reduce the risk of apple scab infection, including promoting leaf decomposition, pruning, site and variety selection, and balanced fertilization.

Benefits

Applying a combination of preventive, protective and curative measures during the ascospores phase in spring efficiently decreases the risk of infection.

Practical recommendations

Preventive measures to avoid risk of infection:

Varieties: Use scab-resistant/tolerant apple varieties, such as e.g. Story/Inored, Topaz, Opal, Ladina, or Santana^{1,2}

Applicability box

Thoma

Crop production, Horticulture, Temperate Fruits

Keywords

Biological disease control, plant protection, apples, apple scab

Context

Temperate regions, can be applied wherever apple scab is an issue

Application time

Throughout all year

Period of impact

Up to one year

Equipment

Vinasse (Status of approval for organic production must be checked in respective country)

Leaf vacuum cleaner (if applicable; temporary rental can be considered)

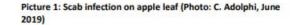
- Good plant aeration/site selection: Apple scab depends on leaf moisture for successful infection. Therefore, it is important to allow quick drying of the plants with well-lit and air-permeable canopies and planting systems. To do so:
 - Align rows towards the main wind direction;
 - Space plants widely;
 - Prune trees and roots to achieve steady growth and a loose canopy.

Preventive measures to reduce inoculum and reduce the risk of infection:

Promotion of foliage decomposition in autumn/spring reduces the ascospores potential for the upcoming season. You can promote this via:

- Mechanical shredding of infected plant parts (fallen leaves) by tillage;
- Use of Vinasse in autumn at leaf fall (single application);
- Use a leaf vacuum cleaner to actively remove infested leaves (Picture 1) from the tree strips within the orchards (Picture 2).







Picture 2: Leaf vacuum cleaner (Company PERFECT) used to remove fallen leaves from the tree strips in autumn (Photo: B. Benduhn, February 2014)

Further information

Video

• "Perfect" Mow Load Combination MLC-150 (Van Wamel BV)

Weblinks

- 1. Oeser, N. 2022. Practices abstract Apple scab: Robust cultivars for Central Europe. FÖKO, BIOFRUITNET.
- Lindhard-Pedersen, H. and Bojesen, M. 2022. Practice abstract <u>Apple scab: Robust cultivars for Northern Europe</u>. Hortiadvice, BIOFRUITNET.
- Fliessbach, A., Schmidt, C., Bruns, C., Palmer, M., Nietlispach, B., Leifert, C., Tamm L. 2007. <u>Soil biological</u> <u>quality in short- and long-term field trials with conventional and organic fertility input types</u>. University of Hohenheim, Germany.

About this practice abstract

Publisher: Fördergemeinschaft Ökologischer Obstbau e.V. (FÖKO) Traubenplatz 5, D-74189 Weinsberg www.foeko.de

Author: Christina Adolphi, Niklas Oeser Contact: niklas.oeser@esteburg.de



Review: Ambra De Simone (IFOAM Organics Europe), Lauren Dietemann (FiBL)

Permalink: Organic-farmknowledge.org/tool/44120

Project name: BIOFRUITNET- Boosting Innovation in ORGANIC FRUIT production through stronger networks

Project website: www.biofruitnet.eu

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Rosy apple aphid: Prevent infestation using flower strips

Problem

Rosy apple aphid (Dysaphis plantaginea) damages fruits, young branches, and leaves and compromises the fruit's vield and quality.

Solution

Sowing perennial flower strips promote rosy apple aphids natural enemies (spiders, predator bugs, hoverfly larvae, ladybirds and earwigs). This can act as an effective solution to prevent infestation; however, this must be supplemented with other control methods.

Benefits

Reduction of the damage by pests, often below the economic damage threshold. Moreover, it supports bees

Applicability box

Theme

Horticulture, temperate fruits

Keywords

Apple, natural enemies, functional biodiversity

Context

All Europe

Application time

All year

Period of impact

Spring

(wild and honeybees) feeding and increases the success of pollination of the fruit flowers.

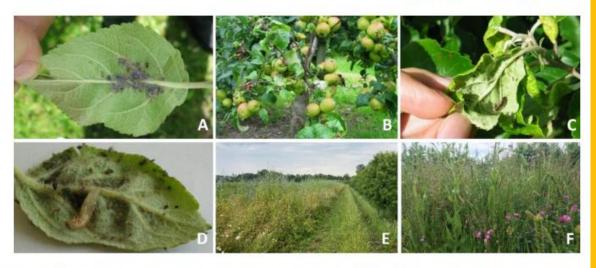
Practical recommendation

- Establish flower strips in the alleyways or areas besides the orchard.
- Leave corners of the orchards untouched to allow the growth of wild plants (weeds).
- Do not sow the flower strips in the tree row: this helps avoid water and nutrients competition and risks associated with frost damage during flowering and rodents.
- A perfect seedbed is needed for the establishment of successful flower strips. Sow in August/September or April/May. After sowing, roll to ensure good contact between seed and soil.
- Use a seed mixture with different species. Some species will grow better than others depending on soil characteristics.
- Mix seeds with sand or vermiculite and use wild resident species produced locally, 1-4 g. seed per m².
- Avoid grass or other dominant species like Chicory (Cichorium intybus).
- In the first year, cut the strip back to a plant height of 30-40 cm after 1-2 months. A second cut may be necessary 6-8 weeks later.
- In the following years, the strips must be cut for mulching 3-4 times per year. Remove the cuts 2-3 days later.





PRACTICE ABSTRACT



Picture 1. (A) Colony of Rosy apple aphids on leaf underside. Photo: M. Bojesen, Hortladvice; (B) Leaves, shoots, and fruits damaged by Rosy apple aphids. Photo: M. Bojesen; (C) Earwig (Dermaptera) is an important predator on aphids. Photo: M. Bojesen; (D) Hoverfly larvae (Syrphidae) is the most important predator on Rosy apple aphid. Photo: M. Bojesen; (E) A high permanent flower strip close to the apple orchard. Photo: Helle Mathiasen; (F) A high permanent flower strip with a high diversity of flowering species. Photo: Helle Mathiasen

Further information

Video

Webinar - Promoting Pollination from the BEESPOKE project (from 00:51 to 1:19:00)

Further reading

- FiBL technical guide "Perennial flower strips a tool for improving pest control in fruit orchards"
- Cahenzli, F., Sigsgaard, L., Daniel, C., Herz, A., Jamar, L., Kelderer, M., Kramer Jacobsen, S., Kruczyńska, D., Matray, S., Porcel, M., Sekrecka, M., Świergiel, W., Tasin, M., Telfser, J., Pfiffner, L. 2019. Perennial flower strips for pest control in organic apple orchards - A pan-European study. Agriculture, Ecosystems & Environment, Volume 278, 2019, Pages 43-53.
- BEESPOKE guide "How to successfully establish perennial wildflowers areas"

About this practice abstract

Publisher: Hortiadvice

Hvidkærvej 29, 5250 Odense SV, Denmark +45 23826347, www.hortiadvice.dk

Author: Hanne Lindhard Pedersen, Maya Bojesen

Contact: Hlp@hortiadvice.dk



Review: Ambra De Simone (IFOAM Organics Europe), Lauren Dietemann

Permalink: Organic-farmknowledge.org/tool/44181

Project name: BIOFRUITNET- Boosting Innovation in organic fruit production through stronger networks

Project website: https://biofruitnet.eu





Codling moth (Cydia pomonella): Control methods in organic fruit production

Applicability box

Keywords

Context

fective measure).

(Index of use: 4.5)

(Index of use: 2,5)

(Index of use: 2.5)

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tober.

Crop production, disease and pest control

Temperate fruits, plant protection, pest control, bio-

logical control, plant protection product, preventive

Index of use is the weighted average between time,

cost and effectiveness expressed within a range of 0-

-Mating disruption: before start of flight of first-gen-

Granulosis-virus: during the first generation, when

-Nematodes: during autumn from September to Oc-

5 (where 5 is the most effective and 0 the least ef-

measures, mating disruption, physical barriers.

Northern and central Europe. Time of application and index of use

eration; start of petal dropping.

the first eggs begin to hatch.

-Alt-carpo nets: after flowering.

-Spinosad: during first larvae detection.

Problem

Codling moth (Cydia pomonella) is the primary pest in organic fruit growing. It damages apple, pear, quince, rowan, medlar, walnut and kaki (photo A-D). Generations/years vary depending on the soil and climates zones.

Solution

Several control methods can be applied in organic farm ing depending on the infection rate, but plant protection products and mating disruption are the most common.

Benefits

Choosing suitable methods may reduce the time for intervention in the field. In the following season, precaution ary measures can significantly reduce the spread of this pest.

Practical recommendation

- · Precautionary measures: Remove woodpiles from the orchard and the affected fruit during thinning.
- Mating disruption with pheromone dispensers (passive dispensers and aerosols: Effective if used on a large scale and if the impact of the attack is limited. It is recommended to combine with other measures. Monitor the presence of the pest with traps set up in the orchard (Picture F) (Practice abstract coming soon).
- Granulosis virus (CpGV): Generally effective when the attack is mild and not sufficient to contain spreading
 - in the case of stronger attacks. Treatments are best conducted during the twilight hours (Weblink 6)
- Spinosine: The most effective plant protection product available. It can be applied a maximum three times per year (Practice abstract coming soon).
- Alt'Carpo nets: Involves netting the plants with a mesh tighter than the average anti-hail nets. The netting can be done using a single-plot or single-row system. It is the most effective method to prevent adults from fleeing (Picture E).
- Entomopathogenic nematodes of the species Steinernema feltiae can parasitise codling moth larvae during the overwintering phase with an efficiency of up to 50%. Apply entomopathogenic nematodes with a high-water supply and high moisture content and a temperature (during treatment and the following 3 hours) of at least 10°C. On the day of treatment, the minimum temperature must not go below 0°C (Practice abstract coming soon).





PRACTICE ABSTRACT



caterpillar starts to penetrate the epidermis of the fruit (A) by digging tunnels into the pulp (B) until it reaches the central area where the seeds are located. As

a result of the trophic activity of the larvae, the fruits are filled with redness and excrement (C). At the end of its growth, the caterpillar emerges from the fruit by digging an exit tunnel and pupates on the woody organs (D).





Picture E: Alt'Carpo nets, a single-row system is shown. Picture F: To determine the percentage of damage before mating disruption treatments are applied, traps are placed into the orchard.

C A-D: Claudio Casera, E: Thomas Holtz, F: Josef Telfser. Organic farming team- Research Centre Laimburg (RCL).

Further information

Further reading

- . M. Kelderer, C. Casera, E. Lardscheider, A. Rainer (2010). Controlling codling moth with different netting structures and their influence on crop yield and quality. 14th International Conference in Organic Fruit-Growing - Eco-fruit, Fördergemeinschaft Ökologischer Obstbau e. V. Weinsberg, Stuttgart, Deutschland, 183-190. Available here.
- E. Fritsch, K. Undorf-Spahn, J. Kienzle, J. Zimmer, B. Benduhn, C. Adolphi, C.P.W. Zebitz, J.A. Jehle (2020). Monitoring codling moth resistance to Cydia pomonella granulovirus (CpGV) in organic fruit growing in Germany. Proceedings ecofruit Conference 2020, Available here

Weblinks (Coming soon)

- 1. Practice abstract: Decision supporting systems to improve direct control methods of codling moth, IO
- 2. Practice abstract: Mating Disruption: The Key element of a successfull building block strategy against Cydia pomonella in organic apple production, FOKO
- 3. Practice abstract: Innovative methods to reduce codling moth damage, IO
- 4. Practice abstract: Use of Nemathodes in Autumn as preventive measure to reduce infestation level of Cydia pomonella for the following year, FOKO
- 5. Practice abstract: Avoiding bamboo sticks: Indirect measures to reduce infestation pressure of Cydia pomonella in organic pomme fruit production, FOKO
- 6. Practice abstract: Use of Caprovirusine-Products against Cydla pomonella in organic fruit growing to prevent resistance building of the pest, FOKO
- 7. Practice abstract: Codling moth: How to enhance beneficial insects in pome orchards, GRAB
- 8. Practice abstract: Codling moth on pear, DELPHY

About this practice abstract and

Publisher(s): Research Centre Laimburg- Italy Laimburg 6, I-39040 Post Auer (BZ), Italy. Tel. +39 0471 969500, http://www.laimburg.it/ Author: Alfredo Mora Vargas, Markus Kelderer

Contact: alfredo.moravargas@laimburg.it Review: Ambra De Simone, Lauren Dieternann Permalink: Organic-farmknowledge.org/tool/xxx

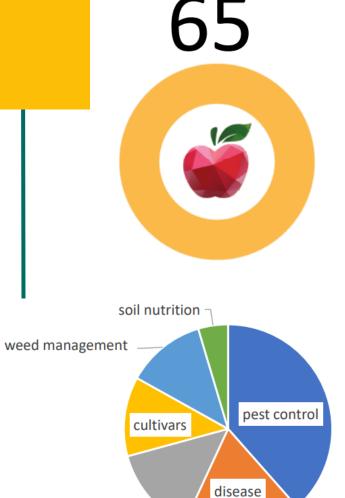
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Project website: https://biofruitnet.eu

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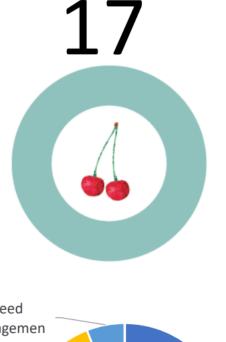
Practice abstracts (n° & topics)

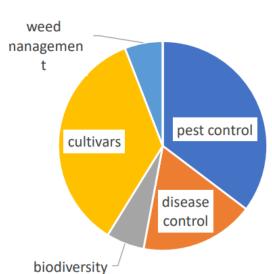




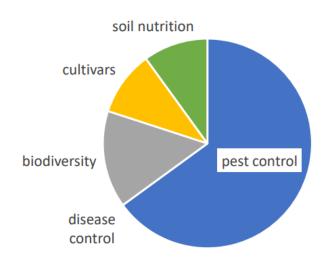
control

biodiversity









Videos. You Tube Channel

INICIO

VÍDEOS

LISTAS

CANALES

INFORMACIÓN

Q

Subidas — ORDENAR POR



Selección de portainjertos y variedades en la producción...

220 visualizaciones • hace 2 semanas

Subtítulos



Aumento de la biodiversidad funcional en el huerto (seto...

1119 visualizaciones • hace 2 semanas Subtítulos



Agroforestería: combinar la producción de fruta y la...

490 visualizaciones • hace 2 semanas Subtítulos



Sarna del manzano (Venturia inaequalis): estrategias de...

426 visualizaciones • hace 1 mes Subtítulos



Fruticultura: Control de insectos nocivos con...

276 visualizaciones • hace 1 mes Subtítulos



Sistema agroforestal: cultivo combinado de frutas y...

980 visualizaciones • hace 2 meses
Subtítulos



Control de plagas en cítricos. Cubiertas vegetales y...

420 visualizaciones • hace 3 meses
Subtítulos



Cómo introducir los ácaros depredadores en los huertos

235 visualizaciones • hace 3 meses
Subtítulos



Cómo aplicar los hongos micorrícicos en los frutales

262 visualizaciones • hace 3 meses
Subtítulos



Regulación de Monilinia laxa en albaricoques ecológicos

511 visualizaciones • hace 4 meses
Subtítulos



Regulación directa del pulgón del cerezo negro en los...

465 visualizaciones • hace 4 meses
Subtítulos



Atrapar la mosca de la manzana (Hoplocampa...

494 visualizaciones • hace 5 meses
Subtítulos



Control mecánico de las malas hierbas en los huerto...



Nuevos métodos en la fruticultura bio: cubiertas...



Mason bees for successful pollination in closed cherry...



Mauerbienen für eine erfolgreiche Bestäubung in...



BIOFRUITNET - Boosting Innovation in Organic Fruit...

Podcasts



- A total of 5 podcast
- 10-30 min episodes
 - ✓ Panel discussions between scientists and stakeholders
 - ✓ Interview with experts
 - ✓ Technical notes
- Available on the project homepage



Berater, Forscherin und Landwirt suchen gemeinsam nach neuen Strategien gegen Marssonina



E-learning courses



- **3 courses**: Citrus; Pome; Stone
- Available on different online training platforms (universities, specialised training centres, etc.)
- Topics addressed: pests and diseases, soil nutrition, functional biodiversity, variety and rootstock selection, etc.





Next 11-13 October.

Lunch Courses in Organic Citrus

Distance learning courses in organic Citrus

Organic Citrus production is expanding rapidly and has a superior market value compared to conventional produce. At the same time, it is a challenging production system.

The European project BIOFRUITNET has developed a distance learning course covering citrus fruit. The aim is to reach a wide range of learners with the most recent knowledge of best plant protection practices in citrus orchards. The course is articulated in three parts, addressing strategies for pest control, emerging phytosanitary risks and functional biodiversity.

11th October 2022 - 13th October 2022



THANKS FOR YOUR ATTENTION!

Evelyne Alcázar Marín. International Manager. ECOVALIA Association

To keep updated go to: https://biofruitnet.eu/es/

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