



Matilde Eizaguirre

Catedràtica d'universitat

Personal Information



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Position: Catedràtica d'universitat

Area of expertise: Entomologia

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University degrees

- Enginyera Tècnica Agrícola en Explotacions Agropequàries, Escola Universitària d'Enginyeria Tècnica Agrícola de Lleida. Universitat Politècnica de Catalunya (UPC), 1978
- Enginyera Agrònoma (especialitat de Fitotècnica. Escola Tècnica Superior d'Enginyers Agrònoms (ETSEA) de Lleida. U P C , 1 9 8 3
- Doctora Enginyera Agrònoma, ETSEA. UPC, 1990
- Acreditació d'Investigació Avançada per Càtedra (AQU) 2004
- Certificat d'Habilitació Nacional per Catedràtica d'Universitat desembre 2006

Previous activities

- Mestra de Laboratori contractada de la EUIT Agrícola de Lleida. Dedicació exclusiva. Del 1-10-77 al 30-9-82.
- Agregada contractada de l'EUIT Agrícola de Lleida. Dedicació exclusiva. De l'1-1-83 al 6-1-85.
- Mestra de Laboratori contractada de l'ETSEA de Lleida. Dedicació exclusiva. De l'1-10-82 al 31-12-82 .
- Professora Titular de l' EUIT Agrícola de Lleida. Dedicació exclusiva. Des del 7-1-85 al 12-07-98.
- Professora Titular d'Universitat de l' ETSEA de Lleida. Dedicació exclusiva. Des del 07-08-98 fins 9-09-07
- Catedràtica d' Universitat de l'ETSEA de Lleida Dedicació exclusiva. Des del 10-09-07

Research

- Control integrat de plagues agrícoles.

Teaching

· INCENDIS I SANITAT FORESTAL

Grau en Enginyeria Forestal



· PRÀCTIQUES INTEGRADES III	Grau en Enginyeria Forestal
· SALUT DELS BOSCOS	Grau en Enginyeria Forestal
· PROTECCIÓ VEGETAL	Grau en Enginyeria Agrària i Alimentària
· RESTAURACIÓ DE SUPERFÍCIES AFECTADES PER INCENDIS	Màster Universitari en Incendis Forestals. Ciè Integral
· ENTOMOLOGIA AGRÍCOLA	Màster Universitari en Enginyeria Agronòmica
· PROGRAMES DE PROTECCIÓ INTEGRADA DE CULTIUS	Màster Universitari en Protecció Integrada de Cul
· SISTEMES DE PRODUCCIÓ I PROTECCIÓ VEGETAL	Màster Universitari en Enginyeria Agronòmica

Recent Publications

Giron-Calva, Patricia Sarai; Lopez, Carmen; Albacete, Alfonso; Albajes, Ramon; Christou, Paul; Eizaguirre, Matilde. 2021. Beta-carotene and *Bacillus thuringiensis* insecticidal protein differentially modulate feeding behaviour, mortality and physiology of European corn borer (*Ostrinia nubilalis*). PLOS ONE 16 (2): e0246696 DOI 10.1371/journal.pone.0246696

Lopez, Carmen; Eizaguirre, Matilde. 2019. Diapause and biological cycle of *Cydalima perspectalis* (Walker) in the eastern Pyrenees. 2019. Journal of Applied Entomology 143:1096–1104. DOI 10.1111/jen.12709

Zanga, Daniela; Sanahuja, Georgina; Eizaguirre, Matilde; Albajes, Ramon; Christou, Paul; Capell, Teresa; Fraser, Paul; Gerrisch, Chris; Lopez, Carmen. 2018. Carotenoids moderate the effectiveness of a Bt gene against the European corn borer, *Ostrinia nubilalis*. PLOS ONE 13 (7): e0199317. DOI 10.1371/journal.pone.0199317

Zhu, C., Farre, G.; Zanga, D.; Lloveras, J.; Michelena, A.; Ferrio, J. P.; Voltas, J.; Slafer, G.; Savin, R.; Albajes, R.; Eizaguirre, M.; Lopez, C.; Cantero-Martinez, C.; Diaz-Gomez, J.; Nogareda, C.; Moreno, J. A.; Angulo, E.; Estany, J.; Pena, R. N.; Tor, M.; Portero-Otin, M.; Eritja, N.; Arjo, G.; Serrano, J. C. E.; Matias-Guiu, X.; Twyman, R. M.; Sandmann, G.; Capell, T.; Christou, P. 2018. High-carotenoid maize: development of plant biotechnology prototypes for human and animal health and nutrition. Phytochemistry Reviews 17 (2): 195-209. DOI 10.1007/s11101-017-9506-4

Lopez, C.; Munoz, P.; Perez-Hedo, M.; Moralejo, M.; Eizaguirre, M. 2017. How do caterpillars cope with xenobiotics? The case of *Mythimna unipuncta*, a species with low susceptibility to Bt. Annals of Applied Biology 171: 364-375. DOI 10.1111/aab.12380

Cruz, Diego; Eizaguirre, Matilde. 2016. Host location behaviour of gravid females in the Mediterranean corn borer *Sesamia nonagrioides*: external morphology of antennae and ovipositor sensilla. Bulletin of Insectology 69 (2): 181-192.

Cruz, D.; Eizaguirre, M. 2015. Response to conspecific and heterospecific semiochemicals by *Sesamia nonagrioides* (L.) (Lepidoptera: Noctuidae) gravid females. Bulletin of Entomological Research 105 (3): 347-354. DOI 10.1017/S0007485315000206

Cruz, D.; Eizaguirre, M. 2015. Do *Sesamia nonagrioides* (Lepidoptera; Noctuidae) gravid females discriminate between Bt or multivitamin corn varieties? Role of olfactory and visual cues. Journal of Insect Science 15 (1): 33 DOI 10.1093/jisesa/iev018



Lee, Marina S.; Albajes, Ramon; Eizaguirre, Matilde. 2014. Mating behaviour of female *Tuta absoluta* (Lepidoptera: Gelechiidae): polyandry increases reproductive output. *Journal of Pest science* 87 (3): 429-439 DOI 10.1007/s10340-014-0576-4

Muñoz, Pilar; Lopez, Carmen; Moralejo, Marian; Perez-Hedo, Meritxell; Eizaguirre, Matilde. 2014. Response of Last Instar *Helicoverpa armigera* Larvae to Bt Toxin Ingestion: Changes in the Development and in the CYP6AE14, CYP6B2 and CYP9A12 Gene Expression. *PLOS ONE* 9 (6): e99229. DOI 10.1371/journal.pone.0099229

Lopez, Carmen; Hernandez-Escareno, Gerardo; Eizaguirre, Matilde; Albajes, Ramon. 2013. Antixenosis and larval and adult dispersal in the Mediterranean corn borer, *Sesamia nonagrioides*, in relation to Bt maize. *Entomologia Experimentalis et Applicata* 149 (3): 256-264 DOI 10.1111/eea.12131

Perez-Hedo, Meritxell; Reiter, Daniel; Lopez, Carmen; Eizaguirre, Matilde. 2013. Processing of the maize Bt toxin in the gut of *Mythimna unipuncta* caterpillars. *Entomologia Experimentalis et Applicata* 148 (1):56-64 DOI 10.1111/eea.12074

Perez-Hedo, M.; Lopez, C.; Albajes, R.; Eizaguirre, M. 2012. Low susceptibility of non-target Lepidopteran maize pests to the Bt protein Cry1Ab. *Bulletin of Entomological Research* 102 (6): 737-743. DOI 10.1017/S0007485312000351

Perez-Hedo, Meritxell; Sanchez-Lopez, Isabel; Eizaguirre, Matilde. 2012. Comparative analysis of hemolymph proteome maps in diapausing and non-diapausing larvae of *Sesamia nonagrioides*. *Proteome Science* 10 (58):1-10. DOI 10.1186/1477-5956-10-58.

Depalo, Laura; Dindo, Maria Luisa; Eizaguirre, Matilde. 2012. Host location and suitability of the armyworm larvae of *Mythimna unipuncta* for the tachinid parasitoid *Exorista larvarum*. *Biocontrol* 57 (4):471-479. DOI 10.1007/s10526-011-9422-2

Moyal P., Tokro P., Bayram A., Savopoulou-Soultani M., Contle E., Eizaguirre M., Leru B., Avand-Faghieh A., Frérot B., Stefanos-Andreadis S. 2011. Origin and taxonomic status of the Palearctic population of the stem borer *Sesamia nonagrioides* (Lefèbvre) (Lepidoptera: Noctuidae). *Biological Journal of the Linnean Society* 103 : 904 - 922

Perez-Hedo M., Eizaguirre M., Albajes R. 2011. Modification of hormonal balance in larvae of the corn borer *Sesamia nonagrioides* (Lepidoptera: Noctuidae) due to sublethal *Bacillus thuringiensis* protein ingestion. *Journal of Economic Entomology* 104 : 853 - 861

Pérez-Hedo M., Goodman W.G., Schafellner C., Martini A., Sehna F., Eizaguirre M. 2011. Control of larval-pupal-adult molt in the moth *Sesamia nonagrioides* by juvenile hormone and ecdysteroids. *Journal of Insect Physiology* 57 : 602 - 607

Lopez-Alonso C., Eizaguirre M., Albajes R. 2011. Mutual pheromone antagonism in two sympatric corn borers, *Sesamia nonagrioides* and *Ostrinia nubilalis*, under field conditions. *Spanish Journal of Agricultural Research* 9 : 308 - 312

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Blanco E., Bonet J.A, Eizaguirre M. 2009. Uso de imágenes satélite Landsat para la detección de rodales de



Pinus nigra Arn. y *Pinus sylvestris* L. afectados por escolítidos. Investigación Agraria-Sistemas y Recursos Forestales 18: 264-275

Schafellner C., Eizaguirre M., López C., Sehna F. 2008. Juvenile hormone esterase activity in the pupating and diapausing larvae of *Sesamia nonagrioides*. Journal of Insect Physiology 54(6):916-921

Eizaguirre M., López C., Albajes R. 2008. Factors affecting the natural duration of diapause and post-diapause development in the Mediterranean corn borer *Sesamia nonagrioides* (Lepidoptera: Noctuidae). Journal of Insect Physiology 54(6): 1057-1063

Eizaguirre M., Albajes R., López C., Sans A., Gemenó C. 2007. Inhibition of pheromone response in *Sesamia nonagrioides* by the pheromone of the sympatric corn borer, *Ostrinia nubilalis*. Pest Management Science 63: 608-614

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Eizaguirre M., Albajes R., López C., Eras J., Lumbierres B., Pons X. 2006. Six years after the commercial introduction of Bt maize in Spain: field evaluation, impact and future prospects. Transgenic Research 15: 1-12

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Eizaguirre M., Tort S., López C., Albajes R. 2005. Effects of sublethal concentrations of *Bacillus thuringiensis* on larval development of *Sesamia nonagrioides*. Journal of Economic Entomology 98: 464-470

De la Poza M., Pons X., Farinós G.M., López C., Ortego F., Eizaguirre M., Castañera P., Albajes R. 2005. Impact of farm-scale Bt maize on abundance of predatory arthropods in Spain. Crop Protection 24 677-684



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López C., Eizaguirre M., Albajes R. 2003. Courtship and mating behaviour of the Mediterranean corn borer, *Sesamia nonagrioides* (Lepidoptera: Noctuidae). *Spanish Journal of Agricultural Research*

Krokos F., Améline A., Bau J., Sans A., Konstantopoulou M., Frérot B., Guerrero A., Eizaguirre M., Malosse C., Etchepare O., Albajes R., Mazomenos B. 2002. Comparative studies of female sex pheromone components and male response of the corn stalk borer *Sesamia nonagrioides* in three different populations. *Journal of Chemical Ecology* 28: 1463-1472

Eizaguirre M., López C., Sans A. 2002. Maize phenology influences field diapause induction of *Sesamia nonagrioides* (Lepidoptera: Noctuidae). *Bulletin of Entomological Research* 92: 439-433

Albajes R., Konstantopoulou M., Etchepare O., Eizaguirre M., Frérot B., Sans A., Krokos F., Améline A., Mazomenos B., 2002. Mating disruption of the corn borer *Sesamia nonagrioides* (Lepidoptera: Noctuidae) using sprayable formulations of pheromone. *Crop Protection* 21: 217-255.

Eizaguirre M., Sans A., López C., Albajes R. 2002. Effects of mating disruption against the Mediterranean corn borer, *Sesamia nonagrioides*, on the European corn borer *Ostrinia nubilalis*. *IOBC/WPRS Bulletin* 25: 59

López C., Sans A., Asin L., Eizaguirre M. 2001. Phenological model for *Sesamia nonagrioides* (Lepidoptera: Noctuidae). *Environmental Entomology* 30: 23-30

Per més informació (Consultes GREC [
<http://webgrec.udl.cat/cgi-bin/DADREC/crgen.cgi?FONT=3&IDI=CAT&PID=367567&IDNC=201210161350170>])