sively grown in Mediterranean countries, in nurseries, orchards and also in private and public gardens. Therefore, citrus relatives (*Rutaceae*), particularly those not covered by the 2000/29EC directive, represent a threat of the introduction of the bacterium. The project ORPRAMed - "Risk assessment of introduction of *Xanthomonas citri* subsp. *citri* through commercial trade of ornamental rutaceous plants in the Mediterranean basin" (ARIMNet2 2015 Transnational Call) aims to assess the risk of the introduction of *Xcc* in the Mediterranean region, by means of ornamental citrus relatives, generating and improving our understanding of the interactions between *Xcc* and ornamentals citrus. The project, which started the 1st of March 2016, involves Italy, France, Spain and Turkey and has work packages dealing with: Economics and trade of ornamental rutaceous plants in the Mediterranean region; Host status of ornamental Rutaceae species and mechanisms of *Xcc* survival and colonization in ornamental plants; Genomic and transcriptomic analysis of the *Xcc* resistant/susceptible genotypes.

78. BASELINE SENSITIVITY OF *STEMPHYLIUM VESICARIUM* OF PEAR TO SDHIs AND FLUAZINAM.

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Brown spot of pear (BSP), a fungal disease caused by *Stemphylium vesicarium* (Wallr.) Simmons, is the most important pear fungal pathogen in Italy since late seventies. Many fungicide applications are required from petal fall to fruit ripening to protect orchards from BSP. The fungus showed field resistance against key products as dicarboximides and strobilurins. The introduction in field of new fungicides with different mode of action is thus fundamental. Boscalid was authorized in Italy as first SDHI (inhibitor of the succinate dehydrogenase in complex II) against BSP in 2007.

The aim of this study was to evaluate the baseline sensitivity of 43 isolates of *S. vesicarium*, collected before 2007 from pear orchards located in Po Valley area, to recent and broad-spectrum fungicide SDHIs (fluxapyroxad, fluopyram, penthiopyrad, bixafen, isopyrazam) and fluazinam, an uncoupler of oxidative phosphorylation. Sensitivity assays were carried out on spore suspension (YBA liquid medium; final density 2×10^4/ml) in microtiter plates using the low time consuming and validated spectrophotometric method. For each compound, concentrations of 0-0.02-0.05-0.5-1-2.5 mg/l were tested on each isolate, in four replicates. After two days of growth, absorbance at 450 nm was evaluated and EC50 values were calculated by probit analysis. Overall baseline sensitivity data, carried out on 43 isolates, showed for tested fungicides EC50 values ranging from 0.01 to 0.52 mg/l. These data describe the initial sensitivity level prior to the introduction of the fungicides and are essential information in resistance monitoring program to detect potential shifts in pathogen sensitivity.

79. VELVET COMPLEX AND GLIOTOXIN BIOSYNTHESIS IN *TRICHODERMA AFRO-HARZIANUM* T6776.

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Nowadays intensive farming and the need of a massive agricultural production require the introduction of a sustainable alternative that can replace the use of chemical products, such as bio-fertilizers and biostimulants. Among them, *Trichoderma afro-harzianum* strain T6776 has been shown to act as a biocontrol agent and as a growth promoter in plants. The Velvet complex genes are reported in several fungal species as a regulatory system with a role in self-growth and reproduction, hydrophobicity and production of secondary metabolites such as gliotoxin (GT). GT was identified for the first time in *Trichoderma virens* and is a molecule with an antimicrobial/antibiotic activity and a role in plant growth promotion. Homologous genes sequences of the Velvet complex corresponding to *vel*A, *vel*B, *vos*A and *fac*B and of the GT biosynthesis gene, *gli*P have been identified in the *T. afro-harzianum* strain T6776 genome and evaluation of their role in T6776- host interaction, by phenotypical characterization of corresponding knock-out mutants will be presented.

80. EXPLOITING PATHOGEN CONFUSION STRATEGY TO ACHIEVE *XYLELLA FASTIDIOSA* BIOCONTROL.

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The recent findings of the plant pathogenic bacterium *Xylella fastidiosa (Xf)*, infecting several plant species in Italy and France, raised major concerns for its potential impact on the EU and Mediterranean agriculture. In the current EU outbreaks, olive is the predominantly affected crop, in which the bacterium has been consistently associated with a new severe syndrome, denoted "Olive Quick Decline". So far, no effective treatments are available to cure infected plants. However, several approaches have been explored, mainly in grapevine and citrus, to reduce bacterial movement and multiplication or directly targeting *Xf*-cells for lysis.

Current knowledge shows that the virulence of the pathogen relies on a fine balance between more motile bacterial forms, able to move and proliferate within xylem vessels, and sticky cells forming a biofilm, which are responsible for vessels blockage and insect acquisition. This different behavior is regulated in a cell density-dependent manner by a diffusible signaling factor (DSF), produced by *rpfF*-gene, that initiates a transduction cascade resulting in up- or down-regulation of several genes. The aim of our investigation is to explore "pathogen confusion" strategy, by altering DSF level *in planta*, for reducing the impact of *Xf*-infections in olives. To this end, a plant viral-based vector, harboring the *rpfF*-gene, has been engineered to induce transient DSF production. Experiments will verify if, upon DSF accumulation, the bacterium will be less motile and more adhesive to the surface of xylem vessels, thus showing a decreased virulence in infected plants.

81. SUPPRESSIVITY OF COMPOSTS MADE FROM THE 2ND-GENERATION BIOETHANOL CHAIN CO-PRODUCTS AND AGRO-INDUSTRIAL RESIDUES AGAINST SOIL-BORNE DISEASES UNDER GREENHOUSE CONDITIONS.

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Compost is a stabilized organic matter deriving from bio-oxidation of undecomposed feedstock. Its utilization in combination with other substrates may give several benefits for the plants, including the suppression of soil-borne plant diseases. However, not all composts are suppressive and its level vary, as well as the range of the suppressed pathogens. One feedstock of 2nd-generation ethanol chain co-products mixed with agro-industrial residues was investigated for finding novel suppressive composts able to control soil-borne diseases. The *in vivo* suppressiveness of three composts (C_M, C_A, C_{WS}) sourcing from the mixtures of crude steam-explosion liquid waste of miscanthus ($SELW_M$), giant reed ($SELW_A$) and wheat straw ($SELW_{WS}$) with the agro-wastes available in Southern Italy (Apulia and Campania) was studied against the *Phytium ultimum*/Cucumber, *Phytophthora nicotianae*/Tomato, *Rhizoctonia solani*/Bean, *Sclerotinia sclerotiorum*/Lettuce, *Fusarium oxysporum* f.sp. *melonis*/Melon, *F. oxysporum* f.sp. *lycopersici*/Tomato and *Verticillium dahliae*/Eggplant pathosystems, by comparing their suppressiveness with those of one reference compost (C_C) obtained from the bio-wastes. *In vivo* tests performed under greenhouse conditions showed multi-suppressive activity of all composts: C_{WS} ($SELW_{WS}$ + woodchips + tomato-waste) suppressed most efficiently *P. ultimum*, *R. solani*, *P. nicotianae*, *F. oxysporum* f.sp. *melonis*, *F. oxysporum* f.sp. *lycopersici*, *V. dahliae*; C_M ($SELW_M$ + coffee-grounds + artichoke-waste) was capable to suppress *P. ultimum*, *R. solani*, *P. nicotianae*, *S. sclerotiorum*, *V. dahliae*; C_A ($SELW_A$ + defatted olive marc + fennel-waste) was suppressive against *R. solani*, *P. nicotianae*, *V. dahliae*. Instead, C_C was mostly suppressive against *F. oxysporum*. Autoclaving composts reduced their suppressiveness in all pathosystems demonstrating crucial role played by microflora.

82. BIOLOGICAL CONTROL OF TRACHEO FUSARIOSIS IN WILD ROCKET BY *TRICHODERMA* SPP..

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Fusarum oxysporum f. sp. *raphani* (For) is one of the causal agents of fusarium wilt in wild rocket (*Diplo-*