

FASTIDIOUS X STRIKES AGAIN

WHILE OLIVE TREES WERE DYING IN SOUTHERN ITALY, FASTIDIOUS X WAS UNEXPECTEDLY DISCOVERED IN THE BALEARIC ISLANDS. VINES, OLIVE AND ALMOND TREES WERE FALLING SICK IN THE ARCHIELAGO.

I DON'T WANT TO WORRY YOU, BUT YOUR COLOUR IS NOT NORMAL.

XYLELLA FASTIDIOSA HITCHES A RIDE FROM ONE PLANT TO ANOTHER ON XYLEM FEEDER INSECTS. IN EUROPE, IT USES THE SO-CALLED SPITTLEBUGS!

!?

HMM, THIS XYLEM HAS NOTES OF RAW ALMOND, BUT IT'S QUITE DRY COMPARED TO PREVIOUS YEARS.

RESEARCH SHOWED THAT SPITTLEBUGS MOVE ACROSS ALL CROPS. FROM THE GRASS TO THE SHRUBS AND THE TREES, THEY MOVE ALL AROUND! SO, CONTROLLING THESE INSECTS IS REALLY DIFFICULT.

I'M HERE!

I'M HERE!

I'M HERE!

I'M A SPITTLEBUG NYMPH*. WE DEVELOP IN A COCOON OF WHITE FOAM WE MAKE IN THE GRASS.

I'M HERE!

I'M HERE!

THIS IS AN ENORMOUS CHALLENGE, WHAT CAN WE DO?

WELL, WE CAN LEARN MORE ABOUT HOW THEY TRANSMIT THE BACTERIUM BY STUDYING THEM BACK AT THE LAB.

?

THE SPITTLEBUG PICKS-UP FASTIDIOUS X WHILE FEEDING ON AN INFECTED PLANT. THE BACTERIA GROW IN THE INSECT'S MOUTH, READY TO BE TRANSMITTED AGAIN.

I'M NEGATIVE... YOU?

I'M POSITIVE. THAT PLANT I HAD FOR LUNCH WAS INFECTED WITH *XYLELLA*!

WHOOOPS!

THE ANALYSIS OF THE INSECT'S MOUTH SHOWS WHICH SPECIES ARE CARRYING *XYLELLA*.

THIS IS IMPORTANT TO KNOW. SINCE THE MAJOR VECTOR SPECIES IN EACH REGION MAY BE DIFFERENT, WE NEED DIFFERENT OPTIONS TO CONTROL THEM AND PREVENT FASTIDIOUS X FROM SPREADING FURTHER!

NOW, WE KNOW THAT IN EUROPE SOME SPITTLEBUG SPECIES ARE MORE ABUNDANT THAN OTHERS AND THEREFORE THE RISK OF TRANSMISSION VARIES.

SPITTLEBUGS ARE WIDESPREAD IN EUROPE, SO IF INFECTED PLANTS ARE INTRODUCED, *XYLELLA* CAN BE TRANSMITTED AND ESTABLISH ITSELF FOR A LONG TIME.

FOR INSTANCE, IN THE BALEARIC ISLANDS AROUND 20% OF THE INSECTS WERE POSITIVE TO *XYLELLA*. THIS IS IMPORTANT FOR UNDERSTANDING HOW FASTIDIOUS X MAY SPREAD FROM CROP TO CROP.

NEOPHILAENUS CAMPESTRIS

PHILAEUS SPUMARIUS

I'M LESS ABUNDANT IN THE CROPS.

FASTIDIOUS X HAS MADE IT CLEAR THAT IT WANTS TO STAY IN EUROPE, POSING A THREAT TO OUR PLANTS. WHAT CAN BE DONE NOW?

TO BE CONTINUED...

* NYMPHS ARE INSECTS IN THE EARLY STAGES OF DEVELOPMENT, THEY TRANSFORM INTO ADULTS.