

A new race of *Fusarium oxysporum* f.sp. *lactucae* that causes fusarium wilt of lettuce.

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Fusarium oxysporum f. sp. *lactucae*, the causal agent of Fusarium wilt of lettuce (*Lactuca sativa* L.) occurs in most countries in which lettuce is grown and causes serious economic losses. Three races (1, 2, and 3) of the pathogen have been previously described based on their ability to cause disease on differential lettuce cultivars as well as by molecular tools developed to characterize different races of this pathogen. Only race 1 has been detected in Europe so far.

Two isolates of *Fusarium oxysporum* obtained from lettuce plants grown in the Netherlands showing symptoms of wilt, were characterized in this study by combining pathogenicity tests using differential cultivars of lettuce and molecular assays. Phylogenetic analysis of elongation factor 1-alpha (EF1- α) gene (Fig 1) and intergenic spacer region (IGS region), IGS-Restriction Fragment Length Polymorphism (RFLP) and Inter-Retrotransposons Amplified Polymorphisms (IRAP) using primers designed within the LTRs of the *Skippy* element and LTRs of *Han solo*-LTR retrotransposons (Fig 2) were carried out to determine whether the isolates were different from the known races of *F.oxysporum* f.sp. *lactucae*.

The results reported the presence of *F. oxysporum* f. sp. *lactucae* for the first time in Netherlands, identified using the IRAP technique as a new race of *F. oxysporum* f. sp. *lactucae*. The primers FPUF and FPUR were designed based on a polymorphic band of the IRAP specific for the two Dutch isolates determined as a new race of *F. oxysporum* f. sp. *Lactucae*.

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