

The Isolation and Identification of Rose Dieback causal agents and the Isolation and study of Inhibition effect of Rose Endophytes as opposed to these causal pathogens in in-vitro condition

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Abstract

For a long time, roses have been the most popular cut flower in the world. Numerous diseases have been seen in these plants, the most important of which is Dieback. Some greenhouses are infected with this disease to a great extent and the economic damage is very high. Studies on this disease have been very limited and the study and identification of these pathogens as a first step in the management of this disease seems necessary. Common methods of managing this disease are both non-chemical and chemical, but these methods are not very effective. One of the strategies for managing diseases is to biologically control them using antagonist microorganisms. The interaction between plants and microorganism helps plants to be in the process of ecosystem recovery. These interactions can increase the plant's ability to utilize soil nutrients by increasing root development, nitrate uptake, and inhibition of soil pathogens. Many endophytes have inhibitory properties against pathogens such as fungi and bacteria. Endophytes seem to be promising alternatives to fertilizers and chemical pesticides in an organic and sustainable farming system. In this case, there will be no need for repeated spraying, pollution will be minimized and costs will be significantly reduced. To do this, after isolating and

identifying the pathogens and proving their pathogenicity using Koch principles, also Isolation and study of Inhibition effect of Rose Endophytes as opposed to these causal agents in in-vitro condition using the dual culture method, The endophytes that form the Inhibition effect are isolated and identified as biological control agents. Due to the non-applicability of chemical methods, we should try to greatly reduce the possibility of developing this disease by soaking rose cuttings with endophytes.

Biography

Parvin Zare has completed her BS.c at the age of 23 years from Urmia University and MS.c studies from Shiraz University at the age of 27 years. She is an experienced Technical Assistant with a demonstrated history of working in the Plant protection clinic. Skilled in RNA-Seq and transcriptome data analysis, DNA extraction, Determining the quantity and quality of DNA using Nanodrop device, Gene Expression, DNA Electrophoresis, Tissue Culture, Cell Culture, Real-Time Polymerase Chain Reaction (qPCR), Polymerase Chain Reaction (PCR), Biotechnology, Microscopy, RNAseq. Direct a research program of managing plant diseases in cut flower production (Studied fresh-cut flower production, specially cut Roses in several greenhouses over the last several years).