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ONG Socheath, Adv Crop Sci Tech 2022, Volume 10

Efficacy of bacillus subtilis, trichoderma harzianum, kocide for controlliing the bacterial wilt on tomato

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Tomatoes are now one of the most commercially important vegetables in Cambodia, where they are the fourth most important agriculture crop and the leading tomato growers. Bacterial wilt on tomato disease, caused by Ralstonia solanacearum, was observed in Cambodia in 2019 and showed wilting symptoms as well as vascular browing from cut stems, as well as testing positive for Ralstonia solanacearum using the Rs Immunostrip. The bacterium has caused losses of up to 100% on tomato plantations, which has likely been a long-standing issue for Cambodian farmers. Due to severe insect pest and disease problems in Cambodia, pesticide use in crops such as cucumbers, cauliflower, brassica, tomatoes, and eggplant is quite high. Because bacterial wilt is readily eliminated in tomato production, this study was undertaken to evaluate the management of bacterial wilt on tomatoes and to determine the various application treatments for controlling bacterial wilt disease. The experiment was set up in a randomized complete block design (RCBD) with four replications and four treatments, totaling sixty-four pots. The plants were injected and examined for disease severity after being planted for 24 days. The results of the experiment revealed that the scoring of disease severity was considerably different, with Trichoderma harzianum, Bacillus subtilis, and Kocide having the lowest scores compared to the control at 95 percent (P-value 0.05). Although the disease incidence of bacterial wilt was 95 percent (P-value 0.05), the disease incidence of

Trichoderma harzianum, Bacillus subtilis, and Kocide were lower. In comparison to the suffixes, the results revealed that Trichoderma harzianum, Bacillus subtilis, and Kocide are the three species that can achieve the maximum total yield of tomatoes, with average yield amounts.

Biography

Ong Socheath was born on the 08th of January 1988 in Phnom Penh, Cambodia. She is plant pathologist and lecture at the Royal University of Agriculture. Socheath graduated her BSc. (2006) from Royal University of Agriculture, MSc (2015) from University of the Philippines Los Banos and Ph.D. (2021) from Nagoya University. In 2015 she became instructor in the newly established laboratory of plant pathology, and in 2017 she became deputy head of the department of plant protection, faculty of Agronomy, a position she still holds. She has expertise in plant protection. Her work is related to vegetable, fruit, and rice disease and finding the disease management. In 2019, she received the Cambodia Decoration Honor Medal.

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Rajwinder Kaur, Adv Crop Sci Tech 2022, Volume 10

Efficient irrigation management for sustainability of agriculture and environment

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Irrigated agriculture is playing a major role in enhancing food and livelihood security of the country. Issues related to water resources are directly linked to cropping pattern of a particular area. The crop water requirements help us in arriving at the volume of water utilised for irrigation purposes and defining deficiency or surplus of storage of surface water as well as ground water recharged. It also indicates the nature of interventions required for bringing about water use efficiency. Now, conveyance of water through underground pipelines instead of open water channel has also been recommended for undulating land and highly permeable soils. In view of the urgent need to maximize use of the available resources, it is imperative to effect utmost economy in water use by adopting efficient and advanced methods of irrigation. Pressurized irrigation methods such as through Sprinkler, Drip, Micro Sprinklers and Rainguns, which is run by solar energy, offer possibilities of achieving higher efficiencies of water use through controlled water distribution. In pressurized irrigation methods, water is applied more frequently, which in turn reduces the moisture stress to the plants and thus enhances the crop growth. In micro irrigation, the water is applied at a very low rate almost matching the evapo-transpiration requirement resulting into significant water savings. The main pathways for enhancing Water use efficiency in irrigated agriculture are to increase the output per unit of water, reduce losses of water to unusable sinks, reduce water degradation, and reallocate water to higher priority uses.

Keywords: Water use efficiency, Water conservation, Irrigation methods, Crop production

Biography

I have completed M.Sc Soil Science in the year 2012 at the age of 25 years from Punjab Agricultural University, Ludhiana, PUNJAB. Worked as Soil Conservation Officer at Department of Soil and Water Conservation, PUNJAB for 7 year and 7 months. I have presented a poster in International Conference on " Sustainable Agriculture for Food and Livelihood Security". And Publish a Abstract in 77th Annual Convention of Indian Society of Soil Science. I have published 4 research papers in reputed journals.

At present, I am working as Sub-Divisional Soil Conservation Officer, in the Department of Soil and Water Conservation, Punjab, INDIA. Brief Duties concerned to my work is to implement various techniques for Soil and Water Conservation and Watershed Management to enhance Sustainability of Agriculture and Natural resources (i.e Soil and Water) and to increase Soil Productivity, Soil fertility and Water Use Efficiency (Canal water, Pond water and Ground water). Different irrigation methods which reduce the seepage losses, Evapo-transpiration losses and conveyance losses and increase the area under crop.

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