

## Pengaruh Ragam Sumber Silika Terhadap Pertumbuhan dan Ketahanan Tanaman Padi Terinfeksi Rhizoctonia solani

<b>Title</b>	Pengaruh Ragam Sumber Silika Terhadap Pertumbuhan dan Ketahanan Tanaman Padi Terinfeksi Rhizoctonia solani
<b>Author Order</b>	1 of 3
<b>Accreditation</b>	4
<b>Abstract</b>	<p>Silica (Si) has ability to increase the plant resistance against pathogen infections. The research was aimed to determine the effect of various sources of Si in increasing resistance of rice plants infected by R. Solani and the plant growth. The Si sources were consisted of control (without silica source), rice husk ash, rice straw ash, hydrophilic silica (SiO<sub>2</sub>), and silica sand. The observed variables were incubation period, disease intensity, infection rate, AUDPC, plant height, number of leaves, number of tillers, root length, root fresh weight, saponin content, tannin content, total phenol content, epidermal thickness, and stomata density. The result showed that Si application from several ingredients was not able to increase the plant growth, but it was able to support the development of root and leaf. Meanwhile, silica application from several materials was able to increase the resistance of rice plants to against the pathogen R. solani, although it was unable to suppress the incubation period. Rice straw ash was able to increase various kinds of growth variables such as number of leaves, root length, root fresh weight and was able to increase the phenolic compound content and thickness of the epidermis of rice leaves, but had not been able to suppress the pathogen R. solani. SiO<sub>2</sub> is able to suppress the development of sheath blight, which is able to reduce the incubation period of up to 5.5 days, a low infection rate of 0.0418 / day, and a relatively low disease intensity of 9.26%.</p>
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