LEMBAR PENILAIAN KARYA ILMIAH

Nama Penulis dan Peneliti : Aflizar, SP.,MP.,Ph.D

Judul Jurnal : Characteristics and potential usage of dissolved Silica in rice cultivation in Sumani Watershed, Sumatra, Indonesia

Status Jurnal : Pertanika J. Trop. Agric. Sci 39(4):601 – 615.

:http://www.pertanika.upm.edu.my/ accepted Juli 2016. ISSN: 1511-3701

No	UNSUR YANG DINILAI	BOBOT	SKOR	NILAI
1.	Kesesuaian judul makalah karya ilmiah dengan bidang yang di ampu oleh penulis	30%	30	9
2.	Pemenuhan kaidah penulisan karya ilmiah	30%	30	9
3.	Kebaharuan aspek/masalah yang diteliti	20%	40	8
4.	Struktur penulisan karya ilmiah (Judul, Permasalahan, Metode penelitian/Pemecahan, hasil dan pembahasan, Kesimpulan, daftar pustaka	10%	30	3
5.	Struktur Kalimat dan Bahasa	10%	40	4
	TOTAL	100%		

Tanjungpati, 1 Maret 2019

Penilai II

Dr. Edi Syafri

NIP: 19791111 2002121003

Catatan:
Skor : 1-40, Untuk Jurnal Internasional
Skor: 140, Untuk Jurnal Nasional Terakreditasi
Skor: 1-10, Untuk Jurnal Nasional tidak Terakreditasi

LEMBAR PENILAIAN KARYA ILMIAH

Nama Penulis dan Peneliti : Aflizar, SP.,MP.,Ph.D

Judul Jurnal : Characteristics and potential usage of dissolved Silica in rice cultivation in Sumani Watershed, Sumatra, Indonesia

Status Jurnal : Pertanika J. Trop. Agric. Sci 39(4):601 – 615.

:http://www.pertanika.upm.edu.my/ accepted Juli 2016. ISSN: 1511-3701

No	UNSUR YANG DINILAI	BOBOT	SKOR	NILAI
1.	Kesesuaian judul makalah karya ilmiah dengan bidang yang di ampu oleh penulis	30%	40	12
2.	Pemenuhan kaidah penulisan karya ilmiah	30%	30	9
3.	Kebaharuan aspek/masalah yang diteliti	20%	20	6
4.	Struktur penulisan karya ilmiah (Judul, Permasalahan, Metode penelitian/Pemecahan, hasil dan pembahasan, Kesimpulan, daftar pustaka	10%	40	4
5.	Struktur Kalimat dan Bahasa	10%	40	4
	TOTAL	100%		

Tanjungpati, 3 Maret 2019

Penilai I

Dr. Neni Trimedona, S.Si. M.Si

NIP: 197209102000032001

Catatan:
Skor : 1-40, Untuk Jurnal Internasional
Skor: 140, Untuk Jurnal Nasional Terakreditasi
Skor: 1-10, Untuk Jurnal Nasional tidak Terakreditasi

Pertanika J. Trop. Agric. Sci. 39 (4): 601 - 615 (2016)

PERTANIKA

TROPICAL AGRICULTURAL SCIENCE

Journal homepage: http://www.pertanika.upm.edu.my/

Characteristics and Potential Usage of Dissolved Silica in Rice Cultivation in Sumani Watershed, Sumatra, Indonesia

Hiroaki Somura[1]*, Darmawan[2], Kuniaki Sato[1], Makoto Ueno[1], Husnain[3], Aflizar[4] and Tsugiyuki Masunaga[1]

[1]Shimane University, Faculty of Life and Environmental Science, 1060 Nishikawatsu, Matsue, Shimane 6908504, Japan
[2]Andalas University, Faculty of Agriculture, Padang 25163, West Sumatra, Indonesia
[3]Indonesian Soil Research Institute, Bogor 16114, West Java, Indonesia
[4]State Polytechnic Payakumbuh for Agriculture, Payakumbuh 26271, West Sumatra, Indonesia

ABSTRACT

Research on watershed silica dynamics in Indonesia has been sparse as most of the focus on water environment has centred on suspended sediments, nitrogen and phosphorous. Thus, Si concentrations in rivers and their seasonal and spatial variations are not well understood. Silicon helps rice plants to overcome abiotic and biotic stresses by preventing lodging and increasing resistance against pests and diseases. Rice is one of the more important crops in the country, and information on Si concentrations in rivers is useful because river water is a primary irrigation source. In this study, we conducted a preliminary research on temporal and spatial variations in dissolved Si (DSi) concentrations at watershed scale to help achieve an efficient use of Si resources through irrigation water management. The Sumani Watershed, located approximately 50 km east of Padang City in West Sumatra, Indonesia, was selected as the target area. Lake Dibawah lies on the upstream end of the watershed, and water is discharged from the watershed into Lake Singkarak. The results verified that Lake Dibawah had a dam effect of naturally reducing DSi concentrations in water. In addition, the average DSi concentration from the samples obtained from rivers, small channels, and ditches from October 2013 to December 2014 did not show strong seasonal patterns at each site but revealed clear spatial differences among sub-watersheds linked to the groundwater from Mt. Talang. The watershed has a high capability of supplying DSi to paddy fields via irrigation water.

ARTICLE INFO

Article history:
Received: 18 January 2016
Accepted: 4 July 2016

E-mail addresses:
som-hiroaki@life.shimane-u.ac.jp (Hiroaki Somura),
darmawan_darma@yahoo.com (Darmawan),
ksato@life.shimane-u.ac.jp (Kuniaki Sato),
makoto-u@life.shimane-u.ac.jp (Makoto Ueno),
husnain.isri@gmail.com (Husnain),
aflizar_melafu@yahoo.com (Aflizar),
masunaga@life.shimane-u.ac.jp (Tsugiyuki Masunaga)
* Corresponding author

ISSN: 1511-3701