Sebaran Jamur *Ganoderma* spp. dan Kerusakan yang Ditimbulkannya pada Pohon di Kawasan Kampus Universitas Gadjah Mada, Yogyakarta

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Intisari

Universitas Gadjah Mada (UGM) merupakan *Green Campus* yang menerapkan prinsip Kampus Berkelanjutan dengan memperhatikan tata lanskap vegetasi. Konsep yang dikembangkan dalam pengelolaan vegetasi di UGM adalah *Green Way*, terdiri dari *Closed System* (*CS*) yang ditujukan sebagai daerah penyerapan air dan penyejukan udara dan *Open System* (*OS*) sebagai tempat parkir dan ruang terbuka fakultas. *CS* dan *OS* didominasi oleh pohon-pohon dengan jumlah cukup banyak dan karakter yang beragam. Namun berdasarkan laporan dari tim vegetasi UGM, pada saat musim hujan yang disertai angin kencang, banyak pohon yang roboh atau tumbang dan ditemukan badan buah jamur *Ganoderma* spp. pada bagian batang atau akarnya. Sesuai dengan kondisi tersebut, penelitian ini dilakukan untuk mengetahui sebaran jamur *Ganoderma* spp. dan menghitung kerusakan yang ditimbulkannya pada pohon di kawasan UGM.

Penelitian ini dilakukan di lokasi *CS* dan *OS* UGM pada bulan Maret-April 2021 dengan metode survei. Jumlah kemunculan, ukuran, dan koordinat badan buah diperlukan untuk menunjukkan sebaran jamur *Ganoderma* spp. pada suatu kawasan dan waktu tertentu. Kemudian pohon yang ditumbuhi jamur *Ganoderma* spp. dievaluasi kerusakannya melalui penilaian kerusakan tajuk dan batang, resiko pohon tumbang yang diperoleh dari kombinasi kerusakan tajuk dan batang, serta penentuan pola sebarannya.

Hasil penelitian menunjukkan bahwa jamur *Ganoderma* spp. di kawasan UGM tumbuh pada berbagai substrat seperti pohon hidup, pohon mati, tonggak, potongan batang, dan permukaan tanah. Jumlah kemunculan dan jumlah badan buah, terutama fase muda lokasi *CS* lebih banyak daripada *OS*. Keberadaan jamur *Ganoderma* spp. yang paling banyak di lokasi *CS* berada di Lembah UGM dan Arboetum Fakultas Kehutanan, sedangkan di lokasi *OS* berada di area Fakultas-Fakultas UGM. Status rerata luas serangan seluruhnya jarang, status rerata intensitas kerusakan tajuk berkisar antara ringan sampai parah, dan status rerata intensitas kerusakan batang berkisar antara sedang sampai parah. Pohon di kawasan UGM yang ditumbuhi jamur *Ganoderma* spp. sebanyak 67 pohon terdiri dari 20 jenis dengan status resiko tumbang ringan, sedang, berat dan sangat berat. Jenis pohon dengan status resiko pohon berat dan sangat berat baik dilokasi *CS* maupun *OS* antara lain: *Swietenia macrophylla, Leucaena leucocephala, Pterocarpus indicus, Muntingia calabura, Adenanthera pavonina,* dan *Ficus Benjamina.*

Kata kunci: *Ganoderma* spp., resiko pohon tumbang, *Closed System*, *Open System*

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Distribution of *Ganoderma* spp. and Its Impact to the Trees in Campus Area of Universitas Gadjah Mada, Yogyakarta

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Abstract

Universitas Gadjah Mada (UGM) is a Green Campus with Sustainable Campus system and considering the vegetation landscape. UGM uses Green Way system on the vegetation management, which it consists of Closed System (CS), utilized as water catchment area and air conditioning, and Open System (OS), utilized as parking lot and open space. The area of CS and OS are dominated with high number of trees with different characteristics. However, according to the report of Team of Vegetation Management UGM, on the rainy season many of trees are fallen or broken and the fruiting bodies of *Ganoderma* spp. were found on the stem or root. Regarding to that condition, this research was conducted to delineate the distribution of *Ganoderma* spp. and to calculate the damage impact to the trees in UGM.

This research was conducted in CS and OS area in UGM on the March-April 2021 in a form survey method. The presence, size, and coordinate of the fruiting bodies was assessed to delineate the distribution of *Ganoderma* spp. on the specific area and time. Then the infected trees were evaluated in a form of assessing the damage of crown and stem, the risk level of fallen trees which it was obtained from the combination of the damage of crown and stem, also the distribution pattern.

The result shows that the presence of *Ganoderma* spp. in UGM found on the variate substrates such as living trees, dead wood, stump, logs, dan soil. The number of presence and the number of fruiting bodies, especially the young phase on the CS area is higher comparing to the OS area. The highest presence of *Ganoderma* spp. on the CS area was on the Lembah UGM and Arboretum of Faculty of Forestry. While the highest presence of *Ganoderma* spp. on the OS area was on the faculties area of UGM. The average status of disease incidence overall was rare, the average status of disease severity of crown ranged from low to severe, and the average status of disease severity of stem ranged from medium to severe. The research also found 67 infected trees which belong to 20 species and the risk level of fallen trees were low risk, medium risk, heavy risk, and very heavy risk. Trees with heavy and very heavy risk level of fallen on both CS and OS were *Swietenia macrophylla*, *Leucaena leucocephala*, *Pterocarpus indicus*, *Muntingia calabura*, *Adenanthera pavonina*, and *Ficus Benjamina*.

Keywords: *Ganoderma* spp., the risk level of fallen trees, Closed System, Open System

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