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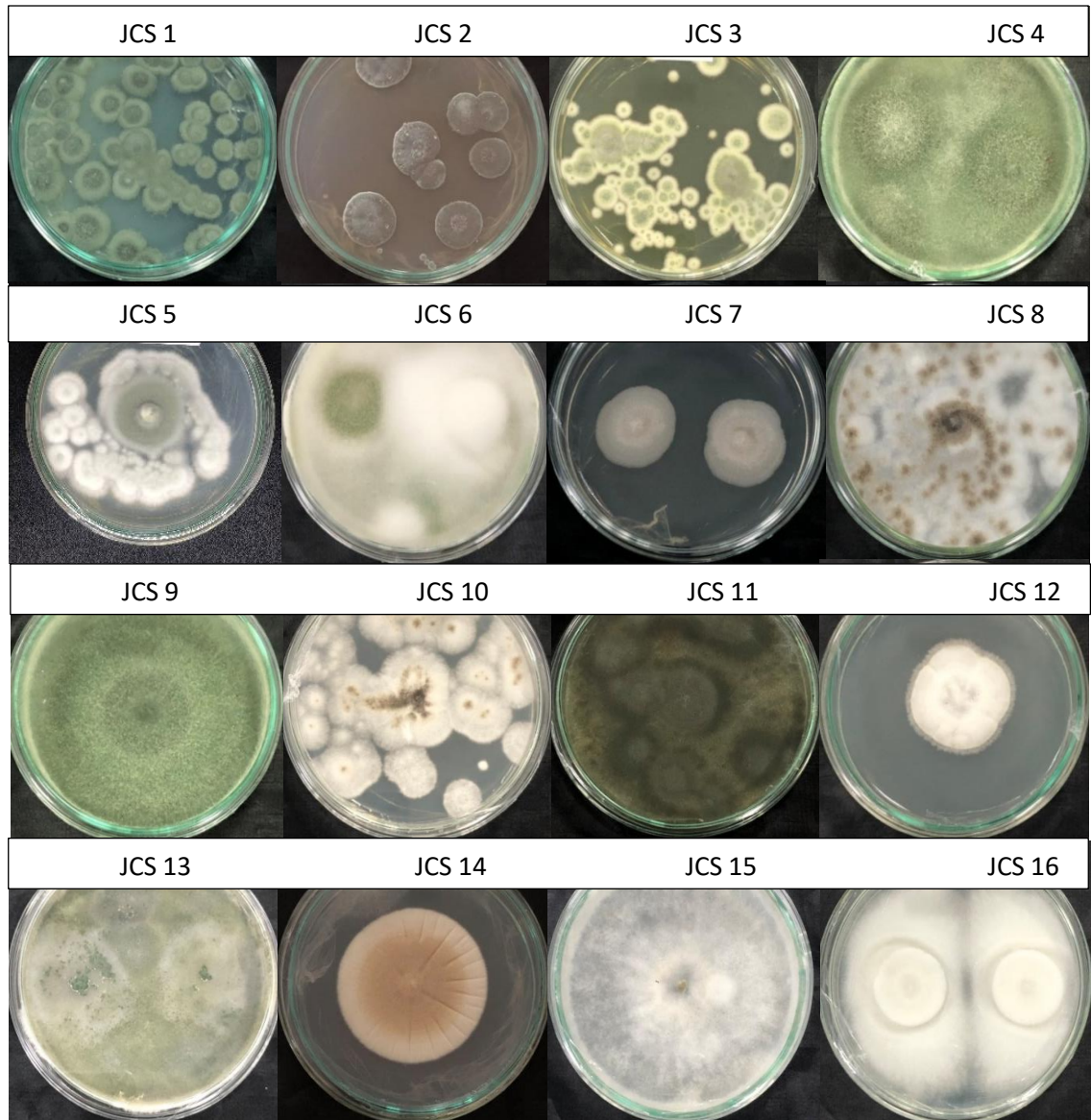
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LAMPIRAN

Lampiran 1. Isolat Murni Cendawan Rhizosfer Hasil Isolasi



Lampiran 2. Isolat Murni Cendawan Patogen Hasil Isolasi

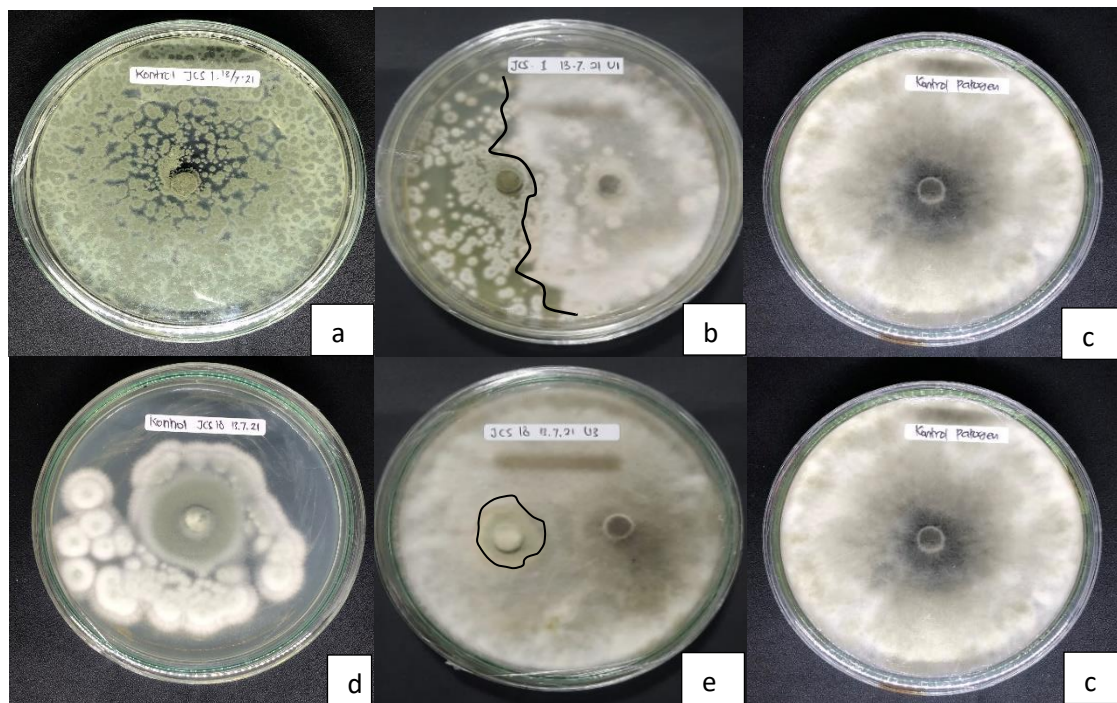


Lampiran 3. Hasil sekuensing DNA-Produk PCR

Kode Isolat	Sequence	
JCS 1	Sequence Assembly 545bp	
	1	AGGTGAACCT GCGGAAGGAT CATTACCGAG TGCGGGGCC TCGGGGCCCA ACCTCCCACC
	61	CGTGTGCCCC GAACCTATGT TGCCTCGGCG GGCCCCGCGC CCGCCGACGG CCCCCCTGAA
	121	CGCTGTCTGA AGTTGCAGTC TGAGACCTAT AACGAAATTA GTTAAAACCTT TCAACAACGG
	181	ATCTCTTGGT TCCGGCATCG ATGAAGAAGC CAGCGAAATG CGATAACTAA TGTGAATTGC
	241	AGAATTCAGT GAATCATCGA GTCTTTGAAC GCACATTGCG CCCTCTGGTA TTCCGGAGGG
	301	CATGCCTGTC CGAGCGTCAT TGCTGCCCTC AAGCCCGGCT TGTGTGTTGG GCCCCGTCCC
	361	CCCCGCCGGG GGGACGGGCC CGAAAGGCAG CGGCGGCACC GCGTCCGGTC CTCGAGCGTA
	421	TGGGGCTTCG TCACCCGCTC TAGTAGGCCG GGCCGGCGCC AGCCGACCCC CAACCTTTAA
	481	TTATCTCAGG TTGACCTCGG ATCAGGTAGG GATACCCGCT GAACTTAAGC ATATCAATAA
541	GCGGA	
JCS 5	Sequence Assembly 584bp	
	1	CTTCCGTAGG TGAACCTGCG GAAGGATCAT TACCGAGTGA GGGCCCTCTG GGTCCAACCT
	61	CCCACCCGTG TTTATTTACC TTGTTGCTTC GCGGGGCCG CCTCACGGCC GCCGGGGGGC
	121	ACCTGCCCCC GGGCCCGCGC CCGCCGAAGA CACCATTGAA CTCTGTCTGA AGATTGCAGT
	181	CTGAGCGATT AGCTAAATCA GTTAAAACCTT TCAACAACGG ATCTCTTGGT TCCGGCATCG
	241	ATGAAGAAGC CAGCGAAATG CGATACGTAA TGTGAATTGC AGAATTCAGT GAATCATCGA
	301	GTCTTTGAAC GCACATTGCG CCCCCTGGTA TTCCGGGGGG CATGCCTGTC CGAGCGTCAT
	361	TGCTGCCCTC AAGCACGGCT TGTGTGTTGG GCCCCGCCCC CCGGTCCCGG GGGGCGGACC
	421	CGAAAGGCAG CGGCGGCACC GCGTCCGGTC CTCGAGCGTA TGGGGCTTTG TCACCCGCTC
	481	TGTAGGCCCG GCCGGCGCCC GCCGGCGACC CCCAATCAAT CTATCCAGG TTGACCTCGG
541	ATCAGGTAGG GATACCCGCT GAACTTAAGC ATATCAATAA GCGG	
JC M	Sequence Assembly 562bp	
1	AAACTCGGTA ATGATCCTTC CGTAGGTGAA CCTGCGGAAG GATCATTACC GAGTTTTCGA	

61	GCTCCGGCTC GACTCTCCCA CCCTTGTGA ACGTACCTCT GTTGCTTTGG CGGCTCCGGC
121	CGCCAAAGGA CCTTCAAACCT CCAGTCAGTA AACGCAGACG TCTGATAAAC AAGTTAATAA
181	ACTAAAACCT TCAACAACGG ATCTCTTGGT TCTGGCATCG ATGAAGAACG CAGCGAAATG
241	CGATAAGTAA TGTGAATGC AGAATTCAGT GAATCATCGA ATCTTTGAAC GCACATTGCG
301	CCCCTTGGTA TTCCGGGGGG CATGCCTGTT CGAGCGTCAT TACAACCCTC AAGCTCTGCT
361	TGGAATTGGG CACCGTCCTC ACTGCGGACG CGCCTCAAAG ACCTCGGCGG TGGCTGTTCA
421	GCCCTCAAGC GTAGTAGAAT ACACCTCGCT TTGGAGCGGT TGGCGTCGCC CGCCGGACGA
481	ACCTTCTGAA CTTTTCTCAA GGTGACCTC GGATCAGGTA GGGATACCCG CTGAACTTAA
541	GCATATCAAT AAGCGGAGGA AG

Lampiran 4. Uji antagonis metode *dual cultur* (a) Kontrol *P. citrinum* (b) *P. citrinum* terhadap *L. theobromae*, (c) Kontrol *L. theobromae*, (d) Kontrol *P. camponotum* (e) *P. camponotum* terhadap *L. theobromae* pada media PDA.



Lampiran 5. Uji antagonis metode tidal langsung (a) Kontrol *P. citrinum* (b) *P. citrinum* terhadap *L. theobromae*, (c) Kontrol *L. theobromae*, (d) Kontrol *P. camponotum* (e) *P. camponotum* terhadap *L. theobromae* pada media PDA.

Rata Rata Kertas saring		1.0652								
Rata Rata Kontrol		1.8622								
Miselia Kontrol		0.797								
Konsentrasi Perlakuan		1			2			3		
Ulangan		U1	U2	U3	U1	U2	U3	U1	U2	U3
<i>PDB+Penicillium citrinum</i>		1.5803	1.4617	1.4775	1.4643	1.4624	1.5176	1.4539	1.4129	1.3814
	Bobot miselia	0.5151	0.3965	0.4123	0.3991	0.3972	0.4524	0.3887	0.3477	0.3162
	Nilai Penghambatan	0.2819	0.4005	0.3847	0.3979	0.3998	0.3446	0.4083	0.4493	0.4808
	% Penghambatan	35.37014	50.25094	48.26851	49.92472	50.16311	43.23714	51.22961	56.3739	60.32622
<i>PDB+Penicillium comonatum</i>		1.4914	1.4971	1.7094	1.3697	1.3766	1.5489	1.6149	1.426	1.3264
	Bobot miselia	0.4262	0.4319	0.6442	0.3045	0.3114	0.4837	0.5497	0.3608	0.2612
	Nilai Penghambatan	0.3708	0.3651	0.1528	0.4925	0.4856	0.3133	0.2473	0.4362	0.5358
	% Penghambatan	46.52447	45.80928	19.17189	61.79423	60.92848	39.30991	31.02886	54.73024	67.2271

Diameter Kontrol		8.5								
Konsentrasi Perlakuan		1			2			3		
Ulangan		U1	U2	U3	U1	U2	U3	U1	U2	U3
<i>PDA+Penicillium citrinum</i>	Diameter Patogen	5.8	7	6.2	6.6	7.2	4.4	1.9	3.5	2.7
	Nilai Penghambatan	2.7	1.5	2.3	1.9	1.3	4.1	6.6	5	5.8
	% Penghambatan	31.76471	17.64706	27.05882	22.35294	15.29412	48.23529	77.64706	58.82353	68.23529
<i>PDA+Penicillium comonatum</i>	Diameter Patogen	2.9	6.5	6.1	6.2	4.8	4.2	4.4	4.1	5.3
	Nilai Penghambatan	5.6	2	2.4	2.3	3.7	4.3	4.1	4.4	3.2
	% Penghambatan	65.88235	23.52941	28.23529	27.05882	43.52941	50.58824	48.23529	51.76471	37.64706

Lampiran 6. Hasil Analisis Ragam Persentase penghambatan cendawan antagonis terhadap cendawan patogen dengan metode tak langsung. Notasi huruf menunjukkan perbandingan nilai tengah antar perlakuan berdasarkan DMRT pada taraf nyata 0.01.

Between-Subjects Factors			
		Value Label	N
Perlakuan	1	P1	3
	2	P2	3
	3	P3	3
	4	P4	3
	5	P5	3
	6	P6	3
	7	P7	3
	8	P8	3
	9	P9	3
	10	P10	3
	11	P11	3
	12	P12	3
	13	P13	3
	14	P14	3
Descriptive Statistics			
Dependent Variable: Penghambatan			
Perlakuan	Mean	Std. Deviation	N
p1	44.6267	8.07802	3
p2	47.7700	3.93359	3
p3	55.9700	4.56317	3
p4	54.0033	12.74089	3
P5	37.1633	15.58684	3
P6	50.9900	18.38751	3
P7	25.4833	7.18919	3
P8	28.6233	17.34292	3

P9	68.2300	9.41000	3
P10	39.2100	23.21665	3
P11	40.3887	12.07349	3
P12	45.8767	7.34828	3
P13	.0000	.00000	3
P14	.0000	.00000	3
Total	38.4525	21.55611	42

PERSENTASE PENGHAMBATAN

	Perlakuan	N	Subset		
			1	2	3
Duncan ^{a,b}	13	3	.0000		
	14	3	.0000		
	7	3	25.4833	25.4833	
	8	3	28.6233	28.6233	
	5	3		37.1633	37.1633
	10	3		39.2100	39.2100
	11	3		40.3887	40.3887
	1	3		44.6267	44.6267
	12	3		45.8767	45.8767
	2	3		47.7700	47.7700
	6	3		50.9900	50.9900
	4	3		54.0033	54.0033
	3	3		55.9700	55.9700
	9	3			68.2300
Sig.			.011	.012	.010

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 144.623.

a. Uses Harmonic Mean Sample Size = 3.000.

b. Alpha = .01.