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LAMPIRAN

Lampiran 1. Nilai F hitung dalam analisis ragam pengaruh bakteri rizosfer dan asam salisilat dalam menginduksi ketahanan tanaman 3 varietas jagung terhadap *P. philipinensis*

Sumber keragaman	Masa Inkubasi	Penekanan Penyakit	Keparahan Penyakit
Varietas Anoman	0,16	0,49	0,49
Varietas Bima20	0,12	0,09	0,29
Varietas Bima3	0,59	0,59	0,67

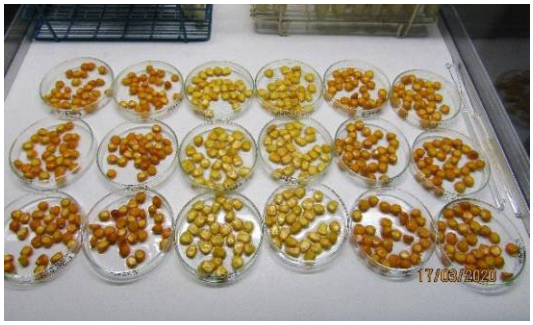
Lampiran 2. Nilai F hitung dalam analisis ragam pengaruh bakteri rizosfer dan asam salisilat dalam memacu pertumbuhan dan produksi 3 varietas tanaman jagung

Sumber keragaman	ADKPTT	Bobot 100 Biji	Bobot Panen
Varietas Anoman	0,07	0,00	0,59
Varietas Bima20	0,88	0,57	0,27
Varietas Bima3	0,92	0,08	0,01**

Lampiran 3. Sterilisasi benih jagung varietas Anoman, Bima 20, & Bima3

Benih jagung didesinfeksi dengan *natrium hipoklorit* selama 2 menit

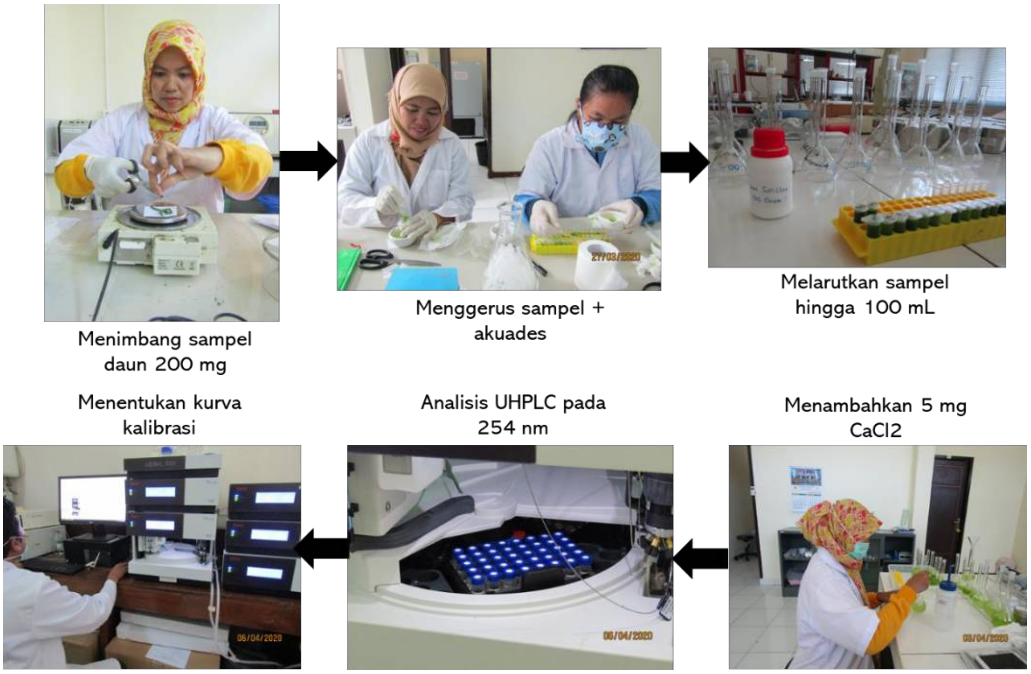
Dibilas 3 kali dengan air steril



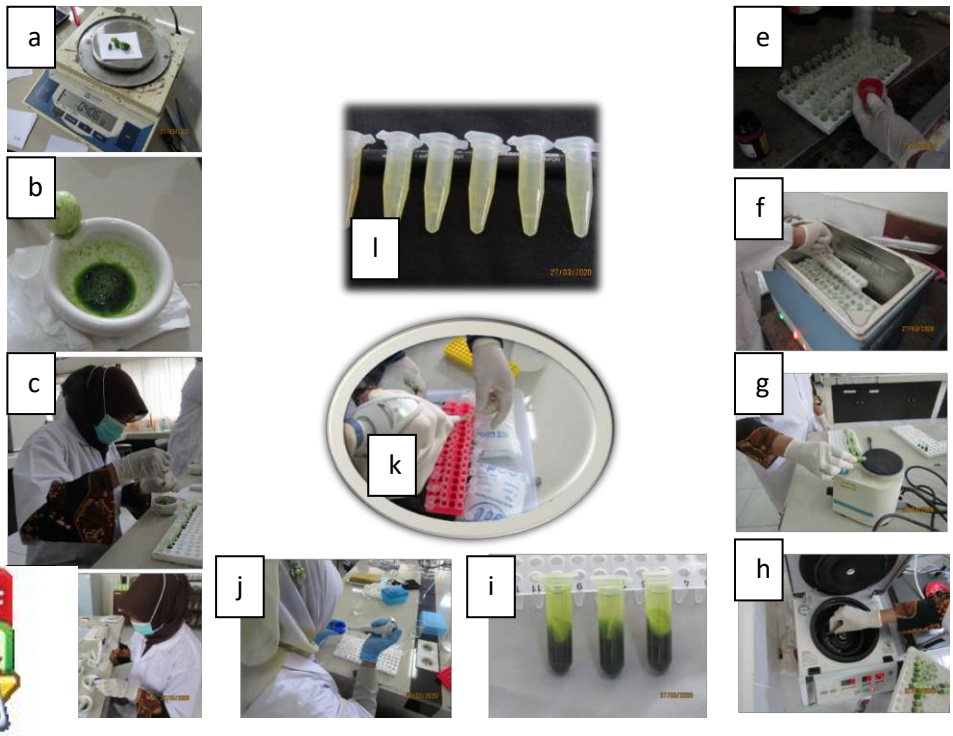
Benih yang telah disterilisasi permukaan siap diberi perlakuan benih

Lampiran 4. Tata letak tanaman jagung pada polibag umur 7 hari setelah tanam

Lampiran 5. Analisis kandungan asam salisilat pada tanaman jagung menggunakan Kromatografi Cair Kinerja Tinggi

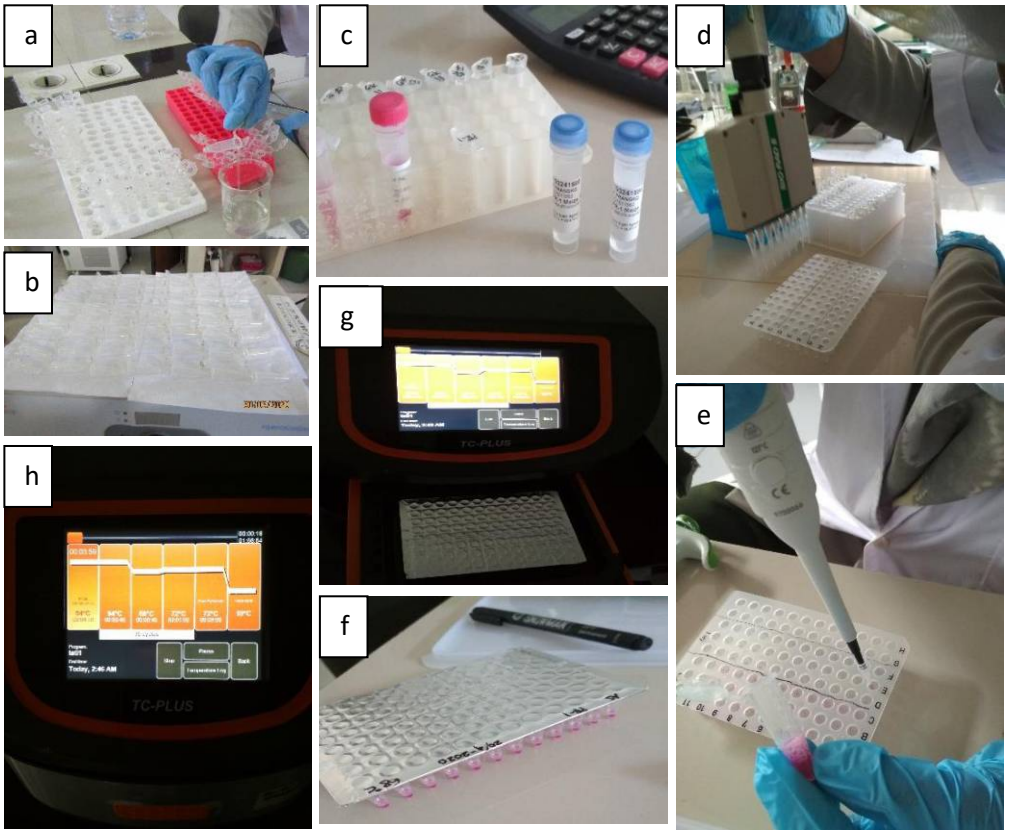


Lampiran 6. Analisis ekspresi gen PR1 dengan metode *one step* RT-PCR



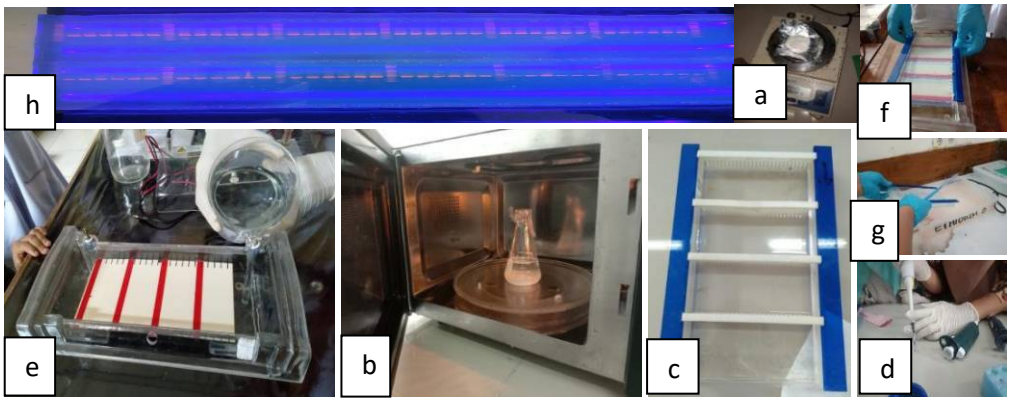
Ket: Isolasi RNA:

a = sampel daun tanaman jagung ditimbang sebanyak 0,2 g
b = sampel daun digerus dan dihaluskan menggunakan mortar
c = hasil gerusan dipindahkan ke dalam tabung 2 mL
d = kemudian ditambahkan buffer ekstraksi CTAB 2x
e = lalu ditambahkan 2β-mercaptoetanol dalam lemari asam
f = diinkubasi pada suhu 65 ^{o}C di *waterbath*
g = ditambahkan kloroformisoamilakohol lalu campuran larutan divortex (1.800 rpm) pada suhu kamar
h = lalu disentrifugasi selama 5 menit pada 4 ^{o}C
i = penampakan supernatan hasil sentrifugasi
j = pengambilan supernatan lalu dipindahkan ke tabung yang baru
k = kemudian ditambahkan isopropanol dingin
l = penampakan pellet DNA setelah inkubasi pada suhu 80 ^{o}C selama 1 jam



plifikasi DNA
sisa-sisa supernatan dibuang lalu pelet yang mengendap
ditambahkan DNAse buffer
pelet DNA dikeringkan selama 20 menit

c = Primer spesifik yang digunakan PR1 forward dan reverse serta enzim MyTaq Red Mix, 2x
d = pengambilan DNA masing-masing sebanyak 1 µL
e = pembagian *cocktail* di mikroplat
f = mikroplat siap diuji PCR
g = peletakan mikroplat pada mesin PCR
h = DNA diamplifikasi pada mesin PCR



Ket: Visualisasi DNA
a = penimbangan agarose
b = agarose dilarutkan menggunakan TBE 0,5x
c = penyediaan kaca plat dan sisir yang telah diberi gel agarose
d = *pre running* hasil PCR
e = pengisian tangka elektroforesis dengan TBE 0,5x
f = penempatan kaca plat ke dalam tangki untuk proses *running*
g = pewarnaan gel agarose dengan perendaman menggunakan *ethidium bromide* selama 10 menit
h = pengamatan hasil visualisasi DNA pada UV transiluminator

Lampiran 7. Penampakan gejala penyakit bulai tanaman jagung pada beberapa perlakuan umur 28 hari setelah inokulasi

Lampiran 8. Deskripsi Jagung Varietas Anoman, Bima20, dan Bima3

Deskripsi Jagung Varietas Anoman-1

Tahun dilepas	: 2 Oktober 2006
Asal	: Maros Sintetik-2 dibentuk dari populasi asal CIMMYT:Tuxpeno Sequia C6 (1999)
Umur	: Berbunga betina+ 56 hari
Panen/masak fisiologis	: + 103 hari
Tinggi tanaman	: + 161 cm
Tinggi tongkol	: + 71 cm
Bentuk/Warna Biji	: gigi kuda-semi gigi kuda
Jumlah baris/tongkol	: 14-18 baris
Bobot 1000 biji	: 320 g
Rata-rata hasil	: 4,6 t/ha (k.a. 15%)
Potensi Hasil	: 6,6 t/ha (k.a. 15%)
Ketahanan	:Tahan penyakit bulai (*P. maydis*) dan moderat hawar daun dan bercak daun
Daerah sebaran	: Lingkungan kering bercurah hujan sedang

Deskripsi Jagung Varietas BIMA 20-URI

Tahun dilepas	: 2013
Asal	: Persilangan antara hibrida silang tunggal G180//Mr14 sebagai tetua betina dan galur Nei9008 sebagai tetua jantan
	: 50% keluar rambut + 58 hst
siologis	: + 102 hari setelah tanam
naman	: + 210 cm

Batang	: Diameter + 2,2 cm, bentuk bulat
Ukuran tongkol	: Panjang +17,9 cm dan diameter + 4,9 cm
Kedudukan tongkol	: Pertengahan tanaman
Kelobot	: Menutup dengan baik
Tipe/Warna biji	: Semi mutiara/Kuning orange
Baris biji	: Silindris
Jumlah baris/tongkol	: 14 - 16
Bobot 1000 biji	: + 339 gram
Potensi Hasil	: 12,8 t/ha
Ketahanan	: Tahan penyakit bulai, karat &hawar daun

Deskripsi Jagung Varietas BIMA 3-BANTIMURUNG

Tahun dilepas	: 7 Februari 2007
Asal	: Nei9008/Mr-14 Nei9008 dikembangkan & galur Departemen Pertanian Thailand
Umur	: 50% keluar rambut : + 56 hari
Masak fisiologis	: + 100 hari
Tinggi tanaman	: + 200 cm
Tongkol	: Besar, panjang, dan silindris (+ 21 cm)
Tinggi tongkol	: + 98 cm
Kelobot	: Tertutup baik (+ 98%)
Bentuk/Warna biji	: Semi mutiara (semi flint) /kuning
Jumlah baris/tongkol	: 12-14 baris
Bobot 1000 biji	: + 359 g
Rata-rata hasil	: 8,27 t/ha pipilan kering
Potensi Hasil	: 10,00 t/ha pipilan kering
Ketahanan	: Toleran terhadap penyakit bulai (*P. maydis*)
sebaran	: Beradaptasi baik pada lahan subur

CURICULUM VITAE

A. Data Pribadi

1. Nama : Nurasiah Djaenuddin

2. Tempat, tgl lahir : Pinrang, 11 November 1983

3. Alamat : Kompleks Balitsereal Jl. Kacang Hijau No. 76 Maros 90514

4. Status Sipil :

a. Nama suami : Sofian Thamrin

b. Nama anak : 1. Muhammad Naufal Ramadhan
2. Farizha Almasyira
3. Asheeqa Annasya

B. Riwayat Pendidikan

a. Pendidikan Formal :

- Tamat SD tahun 1995 di Parepare
- Tamat SLTP tahun 1998 di Parepare
- Tamat SLTA tahun 2001 di Parepare
- Sarjana (S1) tahun 2005 di Universitas Hasanuddin

b. Pendidikan Non Formal : -

C. Pekerjaan dan Riwayat Pekerjaan

- Pekerjaan : Aparatur Sipil Negara
- NIP : 198311112011012007
- Pangkat/Jabatan : Penata Muda Tk I/Peneliti Ahli Pertama

D. Karya ilmiah/Artikel jurnal yang telah dipublikasikan

- Potential tests of plant growth bacteria for the control of *Peronosclerospora philipinensis* in corn (Biodiversitas 2020: 21(8))
- The effectiveness combination of resistant varieties and metalaxyl fungicide in controlling downy mildew disease

(*Peronosclerospora maydis*) in maize plant (Journal of Tropical Plant Pests and Diseases 2019: 19(1))

- Screen house test of eight biopesticide formulation *Bacillus subtilis* against downy mildew, *Peronosclerospora philipinensis*, on corn plant (Journal of Tropical Plant Pests and Diseases 2018: 18(1))
- Kombinasi aplikasi biopestisida dan pestisida nabati untuk mengendalikan penyakit hawar daun *Bipolaris maydis* pada jagung (Jurnal Penelitian Pertanian Tanaman Pangan 2018: 2(1))
- The effectiveness of biopesticide formulation *Bacillus subtilis* BNt8 as biocontrol agent of banded leaf and sheath blight (*Rhizoctonia solani*) disease on corn (*Zea mays* L.) (AAB Bioflux 2017: 9(1))
- Efektivitas formula *Bacillus subtilis* TM4 untuk pengendalian penyakit pada tanaman jagung (Jurnal Fitopatologi Indonesia 2017: 13(4))

E. Makalah pada Seminar/Konferensi Ilmiah Nasional dan Internasional

- Effectiveness of *Bacillus subtilis* TM4 biopesticide formulation as biocontrol agent against maydis leaf blight disease on corn (ICFST 2019: IOP Conf. Series: Earth and Environmental Science 484 (2020) 012096)
- Utilization of antagonistic bacteria *Bacillus subtilis* to control *Fusarium verticilloides* on corn (ICFST 2019: IOP Conf. Series: Earth and Environmental Science 484 (2020) 012096)
- Combination of bacteria-fungi in five formulations of carrier and its effectiveness on composting of corn stalk waste (ICFST 2019: IOP Conf. Series: Earth and Environmental Science 484 (2020) 012096)

- Isolasi dan uji efektifitas *in vitro* beberapa mikroba dekomposer lokal untuk pengomposan limbah tanaman jagung (Prosiding Seminar Ilmiah dan Pertemuan Tahunan ke – 24 2017: Perhimpunan Entomologi Indonesia dan Perhimpunan Fitopatologi Indonesia Komisariat Daerah Sulawesi Selatan)