



LAMPIRAN

LAMPIRAN

Lamp - 1

Data laboratorium nilai Gs tanah yang mengandung akar rumput dikecamatan Mijen

Sampel No. 1

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	836.4	833.8	832.6	829.6
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	774.1	773.1	768.1	765.4
Berat dish, W_d (gr)	105.9	105.9	105.9	105.9
Berat dish + tanah kering, W_{ds} (gr)	202.9	202.9	202.9	202.9
Berat tanah kering, W_s (gr)	97	97	97	97
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	34.7	36.3	32.5	32.8
$G_s = G_t * (W_s / W_w)$	2.774	2.640	2.934	2.892
Gs rata - rata	2.810			

Sampel No. 2

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	836.3	833.8	831	828.3
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	774.2	772.1	769.2	765.9
Berat dish, W_d (gr)	104.9	104.9	104.9	104.9
Berat dish + tanah kering, W_{ds} (gr)	201.7	201.7	201.7	201.7
Berat tanah kering, W_s (gr)	96.8	96.8	96.8	96.8
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	34.7	35.1	35	34.4
$G_s = G_t * (W_s / W_w)$	2.768	2.725	2.719	2.751
Gs rata - rata	2.741			

Sampel No. 3

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	824.9	823.9	821.7	818.3
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778

Lanjut ke hal L - 2

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lanjutan hal L - 1

Berat Elemeyer + air, W_{bw} (gr)	763.4	759.8	757.1	753.5
Berat dish, W_d (gr)	105.4	105.4	105.4	105.4
Berat dish + tanah kering, W_{ds} (gr)	202.6	202.6	202.6	202.6
Berat tanah kering, W_s (gr)	97.2	97.2	97.2	97.2
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	35.7	33.1	32.6	32.4
$G_s = G_t * (W_s / W_w)$	2.701	2.902	2.932	2.933
Gs rata - rata	2.867			

Sampel No. 4

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	831.1	828.4	826.7	824.1
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	768.3	766.3	762.8	759.9
Berat dish, W_d (gr)	97.8	97.8	97.8	97.8
Berat dish + tanah kering, W_{ds} (gr)	194.8	194.8	194.8	194.8
Berat tanah kering, W_s (gr)	97	97	97	97
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	34.2	34.9	33.1	32.8
$G_s = G_t * (W_s / W_w)$	2.814	2.746	2.881	2.892
Gs rata - rata	2.833			

Sampel No. 5

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	835.3	832.7	829.2	827.3
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	771.9	769.7	767.6	764.3
Berat dish, W_d (gr)	105.8	105.8	105.8	105.8
Berat dish + tanah kering, W_{ds} (gr)	202.4	202.4	202.4	202.4
Berat tanah kering, W_s (gr)	96.6	96.6	96.6	96.6
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	33.2	33.6	35	33.6
$G_s = G_t * (W_s / W_w)$	2.887	2.841	2.714	2.811
Gs rata - rata	2.813			

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lamp - 2

**Data laboratorium nilai Gs tanah yang mengandung akar rumput
dikecamatan Mijen**

Sampel No. 1

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	834.2	831.2	828.9	825.8
Temperatur (oC)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	771.9	769.2	767.3	764.1
Berat dish, W_d (gr)	97.6	97.6	97.6	97.6
Berat dish + tanah kering, W_{ds} (gr)	196	196	196	196
Berat tanah kering, W_s (gr)	98.4	98.4	98.4	98.4
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	36.1	36.4	36.8	36.7
$G_s = G_t * (W_s / W_w)$	2.705	2.671	2.629	2.622
Gs rata - rata	2.657			

Sampel No. 2

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	832.1	830	827.5	825.2
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	770.5	768.6	765.2	762.5
Berat dish, W_d (gr)	104.5	104.5	104.5	104.5
Berat dish + tanah kering, W_{ds} (gr)	203.3	203.3	203.3	203.3
Berat tanah kering, W_s (gr)	98.8	98.8	98.8	98.8
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	37.2	37.4	36.5	36.1
$G_s = G_t * (W_s / W_w)$	2.635	2.610	2.661	2.676
Gs rata - rata	2.646			

Sampel No. 3

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	824.3	821.5	818.4	816.2
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	762.9	760	756.9	754.5
Berat dish, W_d (gr)	107.7	107.7	107.7	107.7
Berat dish + tanah kering, W_{ds} (gr)	204.8	204.8	204.8	204.8
Berat tanah kering, W_s (gr)	97.1	97.1	97.1	97.1

Lanjut ke hal L - 4

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lanjutan hal L - 3

Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	35.7	35.6	35.6	35.4
$G_s = G_t * (W_s / W_w)$	2.699	2.695	2.682	2.682
Gs rata - rata	2.689			

Sampel No. 4

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	834.2	831.4	828.7	826.1
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	772.8	770.1	767.2	764.3
Berat dish, W_d (gr)	99.5	99.5	99.5	99.5
Berat dish + tanah kering, W_{ds} (gr)	196.6	196.6	196.6	196.6
Berat tanah kering, W_s (gr)	97.1	97.1	97.1	97.1
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	35.7	35.8	35.6	35.3
$G_s = G_t * (W_s / W_w)$	2.699	2.680	2.682	2.690
Gs rata - rata	2.688			

Lamp - 3

Data laboratorium nilai G_s tanah yang mengandung akar rumput
dikecamatan Gunungpati

Sampel No. 1

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	834.9	833.6	830.9	827.4
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	774.1	773.1	768.1	765.4
Berat dish, W_d (gr)	106.3	106.3	106.3	106.3
Berat dish + tanah kering, W_{ds} (gr)	201.3	201.3	201.3	201.3
Berat tanah kering, W_s (gr)	95	95	95	95
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	34.2	34.5	32.2	33
$G_s = G_t * (W_s / W_w)$	2.756	2.721	2.901	2.815
Gs rata - rata	2.798			

Sampel No. 2

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	837.4	836.5	823.6	823.4
Temperatur (°C)	40	50	60	70

Lanjut ke hal L - 5

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lanjutan hal L - 4

Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	774.2	772.1	769.2	765.9
Berat dish, W_d (gr)	97.1	97.1	97.1	97.1
Berat dish + tanah kering, W_{ds} (gr)	195.3	195.3	195.3	195.3
Berat tanah kering, W_s (gr)	98.2	98.2	98.2	98.2
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	35	33.8	43.8	40.7
$G_s = G_t * (W_s / W_w)$	2.784	2.871	2.204	2.359
Gs rata - rata	2.555			

Sampel No. 3

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	823.1	821.3	820.1	816.8
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	763.4	759.8	757.1	753.5
Berat dish, W_d (gr)	105.7	105.7	105.7	105.7
Berat dish + tanah kering, W_{ds} (gr)	202.4	202.4	202.4	202.4
Berat tanah kering, W_s (gr)	96.7	96.7	96.7	96.7
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	37	35.2	33.7	33.4
$G_s = G_t * (W_s / W_w)$	2.593	2.714	2.821	2.831
Gs rata - rata	2.740			

Sampel No. 4

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	830.4	827.4	824.6	821.2
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	768.3	766.3	762.8	759.9
Berat dish, W_d (gr)	93.2	93.2	93.2	93.2
Berat dish + tanah kering, W_{ds} (gr)	189.1	189.1	189.1	189.1
Berat tanah kering, W_s (gr)	95.9	95.9	95.9	95.9
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	33.8	34.8	34.1	34.6
$G_s = G_t * (W_s / W_w)$	2.815	2.723	2.765	2.710
Gs rata - rata	2.753			

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Sampel No. 5

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	834	832.2	830.6	827.1
Temperatur ($^{\circ}\text{C}$)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	771.9	769.7	767.6	764.3
Berat dish, W_d (gr)	104.6	104.6	104.6	104.6
Berat dish + tanah kering, W_{ds} (gr)	200.9	200.9	200.9	200.9
Berat tanah kering, W_s (gr)	96.3	96.3	96.3	96.3
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	34.2	33.8	33.3	33.5
$G_s = G_t * (W_s / W_w)$	2.794	2.815	2.843	2.811
Gs rata - rata	2.816			

Lamp - 4

**Data laboratorium nilai G_s tanah yang tidak mengandung akar rumput
dikecamatan Gunungpati**

Sampel No. 1

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	836	835.2	831.5	829.9
Temperatur ($^{\circ}\text{C}$)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	772.8	770.1	767.2	764.3
Berat dish, W_d (gr)	92.6	92.6	92.6	92.6
Berat dish + tanah kering, W_{ds} (gr)	193.4	193.4	193.4	193.4
Berat tanah kering, W_s (gr)	100.8	100.8	100.8	100.8
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	37.6	35.7	36.5	35.2
$G_s = G_t * (W_s / W_w)$	2.660	2.790	2.715	2.800
Gs rata - rata	2.741			

Sampel No. 2

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	834.6	832.4	830.2	826
Temperatur ($^{\circ}\text{C}$)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	770.5	768.6	765.2	762.5
Berat dish, W_d (gr)	102.8	102.8	102.8	102.8
Berat dish + tanah kering, W_{ds} (gr)	204.1	204.1	204.1	204.1

Lanjut ke hal L - 7

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lanjutan hal L - 6

Berat tanah kering, W_s (gr)	101.3	101.3	101.3	101.3
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	37.2	37.5	36.3	37.8
$G_s = G_t * (W_s / W_w)$	2.702	2.669	2.744	2.620
Gs rata - rata	2.684			

Sampel No. 3

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	825.5	822.4	818.5	815.8
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, G_t	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	762.9	760	756.9	754.5
Berat dish, W_d (gr)	106.8	106.8	106.8	106.8
Berat dish + tanah kering, W_{ds} (gr)	204.6	204.6	204.6	204.6
Berat tanah kering, W_s (gr)	97.8	97.8	97.8	97.8
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	35.2	35.4	36.2	36.5
$G_s = G_t * (W_s / W_w)$	2.757	2.730	2.656	2.620
Gs rata - rata	2.691			

Sampel No. 4

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	834	831.7	828.2	826.5
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, G_t	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	772.8	770.1	767.2	764.3
Berat dish, W_d (gr)	100.3	100.3	100.3	100.3
Berat dish + tanah kering, W_{ds} (gr)	197.3	197.3	197.3	197.3
Berat tanah kering, W_s (gr)	97	97	97	97
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	35.8	35.4	36	34.8
$G_s = G_t * (W_s / W_w)$	2.688	2.708	2.649	2.725
Gs rata - rata	2.693			

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lamp - 5

**Data laboratorium nilai Gs tanah yang mengandung akar rumput
di Kecamatan Tembalang**

Sampel No. 1

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	837.7	836.2	834.1	832
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	773.5	771.1	768.3	765
Berat dish, W_d (gr)	108.4	108.4	108.4	108.4
Berat dish + tanah kering, W_{ds} (gr)	204.6	204.6	204.6	204.6
Berat tanah kering, W_s (gr)	96.2	96.2	96.2	96.2
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	32	31.1	30.4	29.2
$G_s = G_t * (W_s / W_w)$	2.983	3.056	3.111	3.221
Gs rata - rata	3.093			

Sampel No. 2

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	837.4	836.5	823.6	823.4
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	773.7	770.8	769.6	765.7
Berat dish, W_d (gr)	106.6	106.6	106.6	106.6
Berat dish + tanah kering, W_{ds} (gr)	203.7	203.7	203.7	203.7
Berat tanah kering, W_s (gr)	97.1	97.1	97.1	97.1
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	33.4	31.4	43.1	39.4
$G_s = G_t * (W_s / W_w)$	2.885	3.056	2.215	2.410
Gs rata - rata	2.641			

Sampel No. 3

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	823.1	821.3	820.1	816.8
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	763.4	759.8	757.1	753.5
Berat dish, W_d (gr)	107.7	107.7	107.7	107.7
Berat dish + tanah kering, W_{ds} (gr)	204.8	204.8	204.8	204.8

Lanjut ke hal L - 9

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lanjutan hal L - 8

Berat tanah kering, W_s (gr)	97.1	97.1	97.1	97.1
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	37.4	35.6	34.1	33.8
$G_s = G_t * (W_s / W_w)$	2.576	2.695	2.800	2.809
Gs rata - rata	2.720			

Sampel No. 4

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	830.4	827.4	824.6	821.2
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, G_t	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	772.8	770.1	767.2	764.3
Berat dish, W_d (gr)	99.5	99.5	99.5	99.5
Berat dish + tanah kering, W_{ds} (gr)	196.6	196.6	196.6	196.6
Berat tanah kering, W_s (gr)	97.1	97.1	97.1	97.1
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	39.5	39.8	39.7	40.2
$G_s = G_t * (W_s / W_w)$	2.439	2.411	2.405	2.362
Gs rata - rata	2.404			

Lamp - 6

Data laboratorium nilai G_s tanah yang tidak mengandung akar rumput
dikecamatan Tembalang

Sampel No. 1

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	837.3	834.6	832.1	830.4
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, G_t	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	770.5	768.6	765.2	762.5
Berat dish, W_d (gr)	98.7	98.7	98.7	98.7
Berat dish + tanah kering, W_{ds} (gr)	204.6	204.6	204.6	204.6
Berat tanah kering, W_s (gr)	105.9	105.9	105.9	105.9
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	39.1	39.9	39	38
$G_s = G_t * (W_s / W_w)$	2.687	2.623	2.670	2.725
Gs rata - rata	2.676			

Tugas Akhir
Efektifitas Akar Tanaman Rumput
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Sampel No. 2

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	836.7	834.7	831.6	828.7
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	774.1	773.1	768.1	765.4
Berat dish, W_d (gr)	105	105	105	105
Berat dish + tanah kering, W_{ds} (gr)	203.7	203.7	203.7	203.7
Berat tanah kering, W_s (gr)	98.7	98.7	98.7	98.7
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	36.1	37.1	35.2	35.4
$G_s = G_t * (W_s / W_w)$	2.713	2.629	2.757	2.726
Gs rata - rata	2.706			

Sampel No. 3

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	825.6	823.8	821	817.5
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	762.9	760	756.9	754.5
Berat dish, W_d (gr)	105.7	105.7	105.7	105.7
Berat dish + tanah kering, W_{ds} (gr)	204.8	204.8	204.8	204.8
Berat tanah kering, W_s (gr)	99.1	99.1	99.1	99.1
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	36.4	35.3	35	36.1
$G_s = G_t * (W_s / W_w)$	2.701	2.774	2.784	2.684
Gs rata - rata	2.736			

Sampel No. 4

No Uji	1	2	3	4
Berat Elemeyer + larutan tanah, W_{bws} (gr)	831.4	829.5	826.9	824
Temperatur (°C)	40	50	60	70
Faktor koreksi berat jenis air, Gt	0.9922	0.9881	0.9832	0.9778
Berat Elemeyer + air, W_{bw} (gr)	770.5	768.6	765.2	762.5
Berat dish, W_d (gr)	97.8	97.8	97.8	97.8
Berat dish + tanah kering, W_{ds} (gr)	196.6	196.6	196.6	196.6
Berat tanah kering, W_s (gr)	98.8	98.8	98.8	98.8
Berat air, $W_w = W_s + W_{bw} - W_{bws}$ (gr)	37.9	37.9	37.1	37.3

Lanjut ke hal L - 11

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lanjutan hal L - 10

$G_s = G_t * (W_s / W_w)$	2.587	2.576	2.618	2.590
Gs rata - rata	2.593			

Lamp - 7
Data laboratorium berat isi tanah

keterangan	Tanah yang mengandung akar rumput dikecamatan Mijen	Tanah yang tidak mengandung akar rumput dikecamatan Mijen	Tanah yang mengandung akar rumput dikecamatan Gunungpati	Tanah yang tidak mengandung akar rumput dikecamatan Gunungpati	Tanah yang mengandung akar rumput dikecamatan Tembalang	Tanah yang tidak mengandung akar rumput dikecamatan Tembalang
Tinggi Ring, t	1.6	1.7	1.5	1.55	1.6	1.7
Diameter Ring, d	3.42	3.45	3.42	3.5	3.42	3.45
Vol Ring, V	14.691	15.884	13.773	14.905	14.691	15.884
Berat Ring, W_1	16.1	17.2	15.5	16	16.1	17.2
Tnh Bsh + Ring, W_2	56.1	57.6	51.1	45.4	55.7	57.9
Tnh Krg + Ring, W_3	50	50.1	45	39.1	49.7	50.5
Tanah Basah, W	40	40.4	35.6	29.4	39.6	40.7
Tanah Kering, W_s	33.9	32.9	29.5	23.1	33.6	33.3
Air, W_w	6.1	7.5	6.1	6.3	6	7.4
Kadar air, w	17.994	22.796	20.678	27.273	17.857	22.222
Berat Isi Basah, γ	2.723	2.543	2.585	1.972	2.696	2.562
Berat Isi Kering, γ_d	2.308	2.071	2.142	1.550	2.287	2.096

Lamp - 8
Data laboratorium Uji Hidrometer

t (mnt)	Kecamatan Mijen		Kecamatan Gunungpati		Kecamatan Tembalang	
	Akar Rumput	Tanah Asli	Akar Rumput	Tanah Asli	Akar Rumput	Tanah Asli
1	26	25	42	52	20	22
2	24	23	40	50	18	20
5	20	21	38	48	17	19
10	17	20	36	45	15	17
15	16	18	35	43	14	16
30	14	16	32	41	13	15
60	12	14	29	39	12	13
120	11	13	27	36	11	12
240	10	11	24	32	10	11
1440	10	10	21	28	10	10

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lamp - 9

Data laboratorium Uji Saringan

No saringan	Berat Saringan	berat saringan + tanah + akar rumput		
		Mijen	Gunungpati	Tembalang
4	533	534.6	533.1	534.1
8	480	480.8	480.3	483.4
20	315.3	316.7	316.1	319.9
40	304.5	306.6	305.9	308.6
80	277.6	280.4	280.4	281.4
120	296.3	298.4	298.1	298.4
200	280.2	282.4	282.5	283
pan	271.5	272.2	272.1	272.5

No saringan	Berat Saringan	berat saringan + tanah asli		
		Mijen	Gunungpati	Tembalang
4	533	533	533	533
8	480	480.9	480.4	480.5
20	315.4	321.5	315.8	316.2
40	304.5	311	305.1	305.3
80	277.6	283.1	278.8	278.6
120	296.3	298.5	297.3	297.1
200	280.2	282.7	281.8	281.2
pan	271.5	272.8	272.7	272.5

Lamp - 10

Data laboratorium Uji Geser Langsung tanah yang mengandung akar rumput Mijen (paket 1)

Uji Geser Langsung Akar Rumput Mijen	Uji Geser Langsung Akar Rumput Mijen
tanah + ring : 213,8 gr (D 45-45)	tanah + ring : 210,5 gr (D 45-45)
cawan : 4,6 gr	cawan : 4,6 gr
cawan + tnh basah : 97,3 gr	cawan + tnh basah : 93,8 gr
cawan + tnh kering : 65,9 gr	cawan + tnh kering : 65,9 gr
luas penampang : 27,3397 cm ²	luas penampang : 27,3397 cm ²
tegangan normal : 5 kg / cm ²	tegangan normal : 5 kg / cm ²
kalibrasi : 0,111 kg / div	kalibrasi : 0,111 kg / div

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)	Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	95	10.545	0.386	10	70	7.770	0.284
20	137	15.207	0.556	20	115	12.765	0.467
30	160	17.760	0.650	30	137	15.207	0.556
40	177	19.647	0.719	40	165	18.315	0.670
50	192	21.312	0.780	50	190	21.090	0.771
60	203	22.533	0.824	60	215	23.865	0.873
70	213	23.643	0.865	70	235	26.085	0.954
80	223	24.753	0.905	80	255	28.305	1.035
90	232	25.752	0.942	90	274	30.414	1.112
100	242	26.862	0.983	100	290	32.190	1.177
110	248	27.528	1.007	110	305	33.855	1.238
120	255	28.305	1.035	120	335	37.185	1.360
130	260	28.860	1.056	130	348	38.628	1.413
140	266	29.526	1.080	140	360	39.960	1.462
150	272	30.192	1.104	150	372	41.292	1.510
160	276	30.636	1.121	160	385	42.735	1.563
170	280	31.080	1.137	170	395	43.845	1.604
180	285	31.635	1.157	180	402	44.622	1.632
190	289	32.079	1.173	190	410	45.510	1.665
200	292	32.412	1.186	200	420	46.620	1.705
210	296	32.856	1.202	210	427	47.397	1.734
220	300	33.300	1.218	220	435	48.285	1.766
230	302	33.522	1.226	230	448	49.728	1.819
240	305	33.855	1.238	240	453	50.283	1.839
250	306	33.966	1.242	250	456	50.616	1.851
260	307	34.077	1.246	260	462	51.282	1.876
270	309	34.299	1.255	270	469	52.059	1.904
280	311	34.521	1.263	280	472	52.392	1.916
290	313	34.743	1.271	290	475	52.725	1.929
300	315	34.965	1.279	300	478	53.058	1.941
310	317	35.187	1.287	310	480	53.280	1.949
320	320	35.520	1.299	320	482	53.502	1.957
330	321	35.631	1.303	330	487	54.057	1.977
340	323	35.853	1.311	340	490	54.390	1.989
350	326	36.186	1.324	350	493	54.723	2.002
360	327	36.297	1.328	360	495	54.945	2.010
370	329	36.519	1.336	370	497	55.167	2.018
380	331	36.741	1.344	380	499	55.389	2.026
390	333	36.963	1.352	390	501	55.611	2.034
400	334	37.074	1.356	400	503	55.833	2.042

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

410	335	37.185	1.360
420	336	37.296	1.364
430	337	37.407	1.368
440	338	37.518	1.372
450	339	37.629	1.376
460	340	37.740	1.380
470	340	37.740	1.380
480	341	37.851	1.384
490	341	37.851	1.384
500	342	37.962	1.389
510	343	38.073	1.393
520	344	38.184	1.397
530	345	38.295	1.401
540	346	38.406	1.405
550	346	38.406	1.405
560	346	38.406	1.405

410	505	56.055	2.050
420	507	56.277	2.058
430	509	56.499	2.067
440	513	56.943	2.083
450	516	57.276	2.095
460	519	57.609	2.107
470	523	58.053	2.123
480	526	58.386	2.136
490	529	58.719	2.148
500	530	58.830	2.152
510	534	59.274	2.168
520	534	59.274	2.168
530	534	59.274	2.168
540	533	59.163	2.164
550	531	58.941	2.156
560	531	58.941	2.156

Uji Geser Langsung Akar Rumput Mijen

tanah + ring : 207,5 gr (D 45-45)
 cawan : 4,6 gr
 cawan + tnh basah : 93,6 gr
 cawan + tnh kering : 65,7 gr
 luas penampang : 27,3397 cm²
 tegangan normal : 5 kg / cm²
 kalibrasi : 0,111 kg / div
 kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

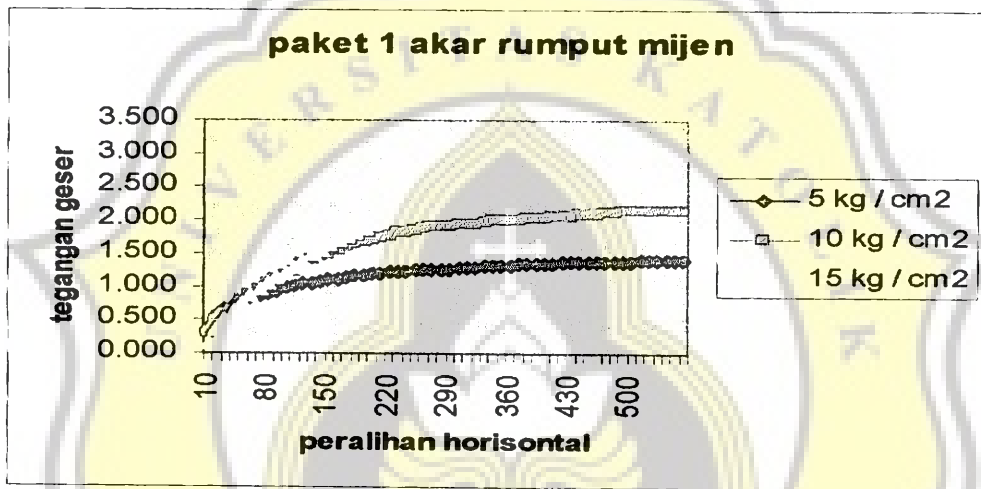
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	35	3.885	0.142
20	90	9.990	0.365
30	125	13.875	0.508
40	155	17.205	0.629
50	185	20.535	0.751
60	210	23.310	0.853
70	235	26.085	0.954
80	257	28.527	1.043
90	277	30.747	1.125
100	295	32.745	1.198
110	318	35.298	1.291

120	340	37.740	1.380
130	370	41.070	1.502
140	385	42.735	1.563
150	402	44.622	1.632
160	418	46.398	1.697
170	435	48.285	1.766
180	450	49.950	1.827
190	465	51.615	1.888
200	480	53.280	1.949
210	493	54.723	2.002
220	505	56.055	2.050
230	520	57.720	2.111
240	535	59.385	2.172
250	545	60.495	2.213
260	558	61.938	2.265
270	565	62.715	2.294
280	576	63.936	2.339
290	582	64.602	2.363
300	590	65.490	2.395
310	600	66.600	2.436
320	612	67.932	2.485
330	621	68.931	2.521
340	630	69.930	2.558
350	642	71.262	2.607
360	652	72.372	2.647
370	659	73.149	2.676
380	665	73.815	2.700

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

390	672	74.592	2.728
400	680	75.480	2.761
410	690	76.590	2.801
420	695	77.145	2.822
430	700	77.700	2.842
440	705	78.255	2.862
450	707	78.477	2.870
460	714	79.254	2.899
470	718	79.698	2.915
480	722	80.142	2.931

490	723	80.253	2.935
500	725	80.475	2.944
510	732	81.252	2.972
520	738	81.918	2.996
530	740	82.140	3.004
540	745	82.695	3.025
550	745	82.695	3.025
560	745	82.695	3.025



Lamp - 11

Data laboratorium Uji Geser Langsung tanah yang mengandung akar rumput Mijen (paket 2)

<p>Uji Geser Langsung Akar Rumput Mijen</p> <p>tanah + ring : 208,3 gr (D 45-45)</p> <p>cawan : 4,6 gr</p> <p>cawan + tnh basah : 100,3 gr</p> <p>cawan + tnh kering : 67,8 gr</p> <p>luas penampang : 27,3397 cm²</p> <p>tegangan normal : 5 kg / cm²</p> <p>kalibrasi : 0,111 kg / div</p> <p>kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div</p>	<p>Uji Geser Langsung Akar Rumput Mijen</p> <p>tanah + ring : 205,9 gr (D 45-45)</p> <p>cawan : 4,6 gr</p> <p>cawan + tnh basah : 97,2 gr</p> <p>cawan + tnh kering : 68,7 gr</p> <p>luas penampang : 27,3397 cm²</p> <p>tegangan normal : 10 kg / cm²</p> <p>kalibrasi : 0,111 kg / div</p> <p>kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div</p>
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Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	85	9.435	0.345
20	110	12.210	0.447
30	127	14.097	0.516
40	239	26.529	0.970
50	250	27.750	1.015
60	262	29.082	1.064
70	271	30.081	1.100
80	280	31.080	1.137
90	290	32.190	1.177
100	297	32.967	1.206
110	310	34.410	1.259
120	314	34.854	1.275
130	319	35.409	1.295
140	322	35.742	1.307
150	325	36.075	1.320
160	326	36.186	1.324
170	325	36.075	1.320
180	285	31.635	1.157
190	325	36.075	1.320
200	324	35.964	1.315
210	324	35.964	1.315
220	325	36.075	1.320
230	334	37.074	1.356
240	345	38.295	1.401
250	348	38.628	1.413
260	351	38.961	1.425
270	353	39.183	1.433
280	356	39.516	1.445
290	358	39.738	1.453
300	360	39.960	1.462
310	363	40.293	1.474
320	364	40.404	1.478
330	366	40.626	1.486
340	367	40.737	1.490
350	369	40.959	1.498
360	370	41.070	1.502
370	371	41.181	1.506
380	372	41.292	1.510
390	376	41.736	1.527
400	376	41.736	1.527

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	75	8.325	0.305
20	130	14.430	0.528
30	165	18.315	0.670
40	195	21.645	0.792
50	225	24.975	0.914
60	240	26.640	0.974
70	265	29.415	1.076
80	280	31.080	1.137
90	295	32.745	1.198
100	312	34.632	1.267
110	330	36.630	1.340
120	350	38.850	1.421
130	370	41.070	1.502
140	386	42.846	1.567
150	414	45.954	1.681
160	425	47.175	1.726
170	435	48.285	1.766
180	446	49.506	1.811
190	454	50.394	1.843
200	466	51.726	1.892
210	471	52.281	1.912
220	476	52.836	1.933
230	480	53.280	1.949
240	485	53.835	1.969
250	485	53.835	1.969
260	484	53.724	1.965
270	484	53.724	1.965
280	482	53.502	1.957
290	484	53.724	1.965
300	485	53.835	1.969
310	486	53.946	1.973
320	487	54.057	1.977
330	488	54.168	1.981
340	490	54.390	1.989
350	492	54.612	1.998
360	496	55.056	2.014
370	500	55.500	2.030
380	505	56.055	2.050
390	523	58.053	2.123
400	527	58.497	2.140

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

410	378	41.958	1.535
420	379	42.069	1.539
430	380	42.180	1.543
440	382	42.402	1.551
450	384	42.624	1.559
460	384	42.624	1.559
470	385	42.735	1.563
480	397	44.067	1.612
490	388	43.068	1.575
500	388	43.068	1.575
510	392	43.512	1.592
520	393	43.623	1.596
530	394	43.734	1.600
540	394	43.734	1.600
550	394	43.734	1.600
560	394	43.734	1.600

410	530	58.830	2.152
420	530	58.830	2.152
430	531	58.941	2.156
440	531	58.941	2.156
450	535	59.385	2.172
460	538	59.718	2.184
470	538	59.718	2.184
480	540	59.940	2.192
490	540	59.940	2.192
500	541	60.051	2.196
510	542	60.162	2.201
520	544	60.384	2.209
530	544	60.384	2.209
540	543	60.273	2.205
550	543	60.273	2.205
560	543	60.273	2.205

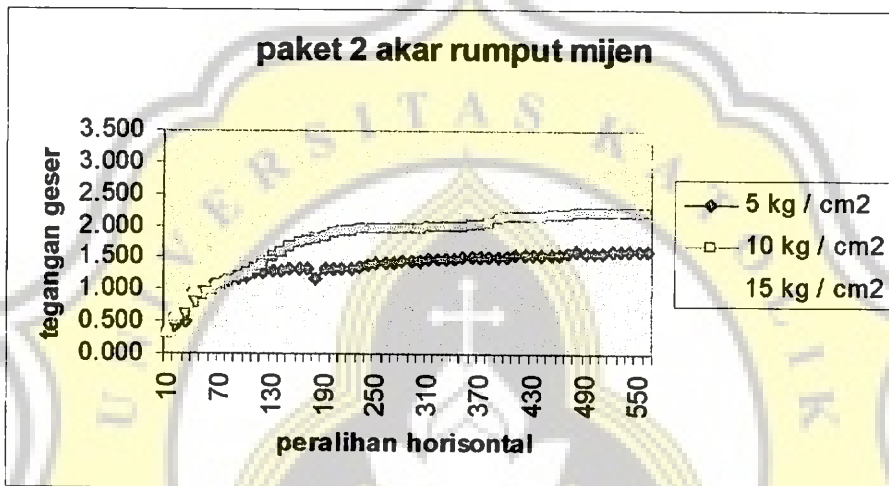
Uji Geser Langsung Akar Rumput Mijen			
tanah + ring : 206,2 gr (D 45-45)			
cawan : 4,6 gr			
cawan + tnh basah : 111,2 gr			
cawan + tnh kering : 71 gr			
luas penampang : 27,3397 cm ²			
tegangan normal : 15 kg / cm ²			
kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	90	9.990	0.365
20	158	17.538	0.641
30	205	22.755	0.832
40	247	27.417	1.003
50	284	31.524	1.153
60	318	35.298	1.291
70	350	38.850	1.421
80	380	42.180	1.543
90	410	45.510	1.665
100	435	48.285	1.766
110	464	51.504	1.884

120	487	54.057	1.977
130	508	56.388	2.062
140	522	57.942	2.119
150	540	59.940	2.192
160	569	63.159	2.310
170	585	64.935	2.375
180	598	66.378	2.428
190	608	67.488	2.468
200	618	68.598	2.509
210	628	69.708	2.550
220	642	71.262	2.607
230	650	72.150	2.639
240	655	72.705	2.659
250	662	73.482	2.688
260	667	74.037	2.708
270	669	74.259	2.716
280	673	74.703	2.732
290	676	75.036	2.745
300	677	75.147	2.749
310	680	75.480	2.761
320	684	75.924	2.777
330	690	76.590	2.801
340	692	76.812	2.810
350	697	77.367	2.830
360	699	77.589	2.838
370	700	77.700	2.842
380	702	77.922	2.850

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

390	705	78.255	2.862
400	715	79.365	2.903
410	711	78.921	2.887
420	709	78.699	2.879
430	711	78.921	2.887
440	718	79.698	2.915
450	720	79.920	2.923
460	726	80.586	2.948
470	731	81.141	2.968
480	736	81.696	2.988

490	743	82.473	3.017
500	754	83.694	3.061
510	755	83.805	3.065
520	754	83.694	3.061
530	754	83.694	3.061
540	753	83.583	3.057
550	753	83.583	3.057
560	752	83.472	3.053



Data laboratorium Uji Geser Langsung tanah yang mengandung akar rumput Mijen (paket 3)

Uji Geser Langsung Akar Rumput Mijen	Uji Geser Langsung Akar Rumput Mijen
tanah + ring : 229,1 gr (D 45-45)	tanah + ring : 207,5 gr (D 45-45)
cawan : 4,6 gr	cawan : 4,6 gr
cawan + tnh basah : 114,7 gr	cawan + tnh basah : 96,8 gr
cawan + tnh kering : 87,2 gr	cawan + tnh kering : 68,9 gr
luas penampang : 27,3397 cm ²	luas penampang : 27,3397 cm ²
tegangan normal : 5 kg / cm ²	tegangan normal : 10 kg / cm ²
kalibrasi : 0,111 kg / div	kalibrasi : 0,111 kg / div
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div	kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

430	373	41.403	1.514
440	377	41.847	1.531
450	379	42.069	1.539
460	383	42.513	1.555
470	387	42.957	1.571
480	390	43.290	1.583
490	391	43.401	1.587
500	392	43.512	1.592
510	393	43.623	1.596
520	395	43.845	1.604
530	396	43.956	1.608
540	395	43.845	1.604
550	395	43.845	1.604
560	394	43.734	1.600

430	545	60.495	2.213
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Uji Geser Langsung Akar Rumput Mijen			
tanah + ring : 207 gr (D 45-45)			
cawan : 4,6 gr			
cawan + tnh basah : 92,6 gr			
cawan + tnh kering : 63,1 gr			
luas penampang : 27,3397 cm ²			
tegangan normal : 15 kg / cm ²			
kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	90	9.990	0.365
20	160	17.760	0.650
30	190	21.090	0.771
40	250	27.750	1.015
50	284	31.524	1.153
60	315	34.965	1.279
70	340	37.740	1.380
80	360	39.960	1.462
90	383	42.513	1.555
100	403	44.733	1.636
110	421	46.731	1.709
120	436	48.396	1.770
130	450	49.950	1.827
140	454	50.394	1.843

150	478	53.058	1.941
160	489	54.279	1.985
170	498	55.278	2.022
180	508	56.388	2.062
190	514	57.054	2.087
200	522	57.942	2.119
210	527	58.497	2.140
220	534	59.274	2.168
230	540	59.940	2.192
240	544	60.384	2.209
250	550	61.050	2.233
260	560	62.160	2.274
270	565	62.715	2.294
280	573	63.603	2.326
290	578	64.158	2.347
300	585	64.935	2.375
310	589	65.379	2.391
320	594	65.934	2.412
330	602	66.822	2.444
340	604	67.044	2.452
350	608	67.488	2.468
360	610	67.710	2.477
370	618	68.598	2.509
380	625	69.375	2.538
390	633	70.263	2.570
400	637	70.707	2.586
410	642	71.262	2.607
420	648	71.928	2.631
430	653	72.483	2.651

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

440	659	73.149	2.676
450	664	73.704	2.696
460	665	73.815	2.700
470	669	74.259	2.716
480	674	74.814	2.736
490	680	75.480	2.761

500	684	75.924	2.777
510	683	75.813	2.773
520	683	75.813	2.773
530	682	75.702	2.769
540	680	75.480	2.761



Lamp - 13

Data laboratorium Uji Geser Langsung tanah yang tidak mengandung akar akar rumput Mijen

tanah + ring : 226,2 gr (D 45-45) cawan : 4,6 gr cawan + tnh basah : 116 gr cawan + tnh kering : 90,8 gr luas penampang : 27,3397 cm ² tegangan normal : 5 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				tanah + ring : 230,5 gr (D 45-45) cawan : 4,6 gr cawan + tnh basah : 119,6 gr cawan + tnh kering : 94,7 gr luas penampang : 27,3397 cm ² tegangan normal : 10 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan	Load Dial	Beban	Tegangan	Peralihan	Load Dial	Beban	Tegangan

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Horisontal (mm)	Reading (div)	Horisontal (kg)	Geser (kg / cm ²)
10	95	10.545	0.386
20	120	13.320	0.487
30	135	14.985	0.548
40	145	16.095	0.589
50	155	17.205	0.629
60	160	17.760	0.650
70	165	18.315	0.670
80	170	18.870	0.690
90	175	19.425	0.711
100	180	19.980	0.731
110	184	20.424	0.747
120	187	20.757	0.759
130	190	21.090	0.771
140	194	21.534	0.788
150	197	21.867	0.800
160	200	22.200	0.812
170	206	22.866	0.836
180	210	23.310	0.853
190	215	23.865	0.873
200	217	24.087	0.881
210	218	24.198	0.885
220	220	24.420	0.893
230	221	24.531	0.897
240	223	24.753	0.905
250	225	24.975	0.914
260	227	25.197	0.922
270	230	25.530	0.934
280	231	25.641	0.938
290	234	25.974	0.950
300	235	26.085	0.954
310	236	26.196	0.958
320	237	26.307	0.962
330	239	26.529	0.970
340	240	26.640	0.974
350	241	26.751	0.978
360	242	26.862	0.983
370	243	26.973	0.987
380	244	27.084	0.991
390	245	27.195	0.995
400	246	27.306	0.999
410	246	27.306	0.999
420	247	27.417	1.003
430	247	27.417	1.003

Horisontal (mm)	Reading (div)	Horisontal (kg)	Geser (kg / cm ²)
10	80	8.880	0.325
20	125	13.875	0.508
30	150	16.650	0.609
40	168	18.648	0.682
50	185	20.535	0.751
60	190	21.090	0.771
70	202	22.422	0.820
80	210	23.310	0.853
90	216	23.976	0.877
100	225	24.975	0.914
110	233	25.863	0.946
120	240	26.640	0.974
130	244	27.084	0.991
140	248	27.528	1.007
150	254	28.194	1.031
160	262	29.082	1.064
170	267	29.637	1.084
180	271	30.081	1.100
190	275	30.525	1.117
200	278	30.858	1.129
210	282	31.302	1.145
220	284	31.524	1.153
230	285	31.635	1.157
240	288	31.968	1.169
250	290	32.190	1.177
260	293	32.523	1.190
270	295	32.745	1.198
280	296	32.856	1.202
290	298	33.078	1.210
300	300	33.300	1.218
310	301	33.411	1.222
320	302	33.522	1.226
330	304	33.744	1.234
340	307	34.077	1.246
350	311	34.521	1.263
360	311	34.521	1.263
370	312	34.632	1.267
380	314	34.854	1.275
390	316	35.076	1.283
400	317	35.187	1.287
410	318	35.298	1.291
420	320	35.520	1.299
430	322	35.742	1.307

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

440	247	27.417	1.003
450	246	27.306	0.999
460	245	27.195	0.995

440	323	35.853	1.311
450	325	36.075	1.320
460	326	36.186	1.324
470	327	36.297	1.328
480	329	36.519	1.336
490	331	36.741	1.344
500	334	37.074	1.356
510	336	37.296	1.364
520	338	37.518	1.372
530	340	37.740	1.380
540	342	37.962	1.389
550	345	38.295	1.401
560	347	38.517	1.409
570	352	39.072	1.429
580	354	39.294	1.437
590	356	39.516	1.445
600	360	39.960	1.462
610	364	40.404	1.478
620	365	40.515	1.482
630	366	40.626	1.486
640	369	40.959	1.498
650	370	41.070	1.502
660	371	41.181	1.506
670	375	41.625	1.523
680	378	41.958	1.535
690	380	42.180	1.543
700	384	42.624	1.559
710	387	42.957	1.571

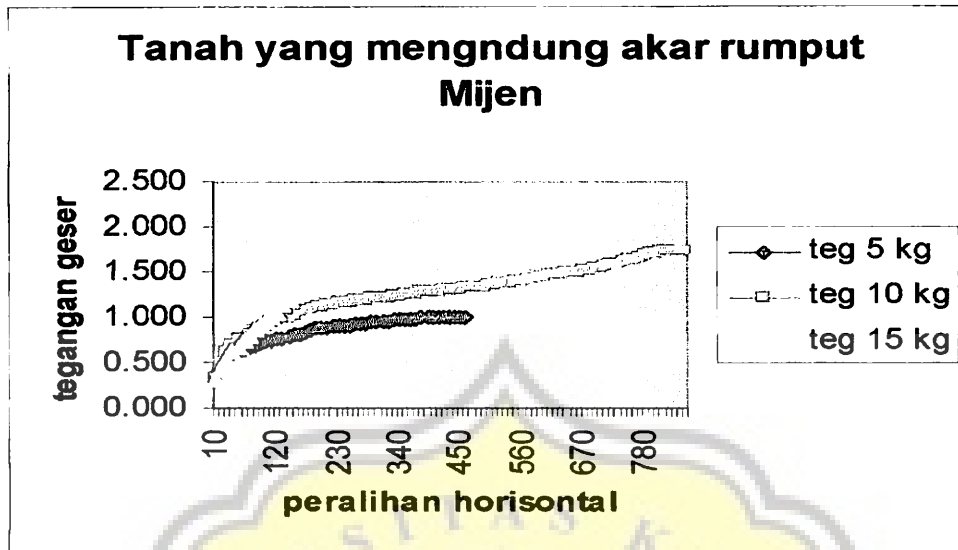
Uji Geser Langsung Tanah Asli Mijen			
tanah + ring : 237 gr (D 45-45)			
cawan : 4,6 gr			
cawan + tnh basah : 111 gr			
cawan + tnh kering : 75 gr			
luas penampang : 27,3397 cm ²			
tegangan normal : 15 kg / cm ²			
kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)

10	75	8.325	0.305
20	108	11.988	0.438
30	131	14.541	0.532
40	150	16.650	0.609
50	164	18.204	0.666
60	180	19.980	0.731
70	195	21.645	0.792
80	211	23.421	0.857
90	221	24.531	0.897
100	234	25.974	0.950
110	249	27.639	1.011
120	260	28.860	1.056
130	279	30.969	1.133
140	293	32.523	1.190
150	303	33.633	1.230

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

160	310	34.410	1.259	420	458	50.838	1.859
170	327	36.297	1.328	430	459	50.949	1.864
180	340	37.740	1.380	440	461	51.171	1.872
190	348	38.628	1.413	450	464	51.504	1.884
200	357	39.627	1.449	460	469	52.059	1.904
210	363	40.293	1.474	470	474	52.614	1.924
220	372	41.292	1.510	480	477	52.947	1.937
230	378	41.958	1.535	490	479	53.169	1.945
240	384	42.624	1.559	500	482	53.502	1.957
250	389	43.179	1.579	510	487	54.057	1.977
260	394	43.734	1.600	520	488	54.168	1.981
270	395	43.845	1.604	530	491	54.501	1.993
280	396	43.956	1.608	540	493	54.723	2.002
290	397	44.067	1.612	550	494	54.834	2.006
300	400	44.400	1.624	560	495	54.945	2.010
310	402	44.622	1.632	570	497	55.167	2.018
320	415	46.065	1.685	580	501	55.611	2.034
330	426	47.286	1.730	590	502	55.722	2.038
340	432	47.952	1.754	600	503	55.833	2.042
350	437	48.507	1.774	610	504	55.944	2.046
360	437	48.507	1.774	620	504	55.944	2.046
370	441	48.951	1.790	630	503	55.833	2.042
380	443	49.173	1.799	640	502	55.722	2.038
390	444	49.284	1.803	650	501	55.611	2.034
400	448	49.728	1.819				
410	451	50.061	1.831				

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng



Lamp - 14

**Data laboratorium Uji Geser Langsung tanah yang mengandung akar akar
rumput Gunungpati (paket 1)**

Uji Geser Langsung Akar Rumput Gunungpati

tanah + ring : 212,1 gr (D 45-45)
 cawan : 4,9 gr
 cawan + tnh basah : 99,9 gr
 cawan + tnh kering : 77,2 gr
 luas penampang : 27,3397 cm²
 tegangan normal : 5 kg / cm²
 kalibrasi : 0,111 kg / div
 kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	79	8.769	0.321
20	108	11.988	0.438
30	127	14.097	0.516
40	142	15.762	0.577
50	157	17.427	0.637

Uji Geser Langsung Akar Rumput Gunungpati

tanah + ring : 222,1 gr (D 45-45)
 cawan : 4,8 gr
 cawan + tnh basah : 107,5 gr
 cawan + tnh kering : 76,9 gr
 luas penampang : 27,3397 cm²
 tegangan normal : 10 kg / cm²
 kalibrasi : 0,111 kg / div
 kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	81	8.991	0.329
20	132	14.652	0.536
30	171	18.981	0.694
40	205	22.755	0.832
50	232	25.752	0.942

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

60	170	18.870	0.690
70	181	20.091	0.735
80	191	21.201	0.775
90	201	22.311	0.816
100	210	23.310	0.853
110	218	24.198	0.885
120	225	24.975	0.914
130	231	25.641	0.938
140	239	26.529	0.970
150	244	27.084	0.991
160	250	27.750	1.015
170	254	28.194	1.031
180	257	28.527	1.043
190	262	29.082	1.064
200	265	29.415	1.076
210	267	29.637	1.084
220	269	29.859	1.092
230	272	30.192	1.104
240	273	30.303	1.108
250	275	30.525	1.117
260	275	30.525	1.117
270	278	30.858	1.129
280	279	30.969	1.133
290	280	31.080	1.137
300	280	31.080	1.137
310	281.5	31.247	1.143
320	283	31.413	1.149
330	284	31.524	1.153
340	284	31.524	1.153
350	284.5	31.580	1.155
360	287	31.857	1.165
370	287	31.857	1.165
380	286	31.746	1.161
390	286	31.746	1.161
400	287	31.857	1.165
410	288	31.968	1.169
420	288	31.968	1.169
430	288	31.968	1.169

60	261	28.971	1.060
70	289	32.079	1.173
80	325	36.075	1.320
90	339	37.629	1.376
100	363	40.293	1.474
110	386	42.846	1.567
120	408	45.288	1.656
130	424	47.064	1.721
140	440	48.840	1.786
150	455	50.505	1.847
160	470	52.170	1.908
170	480	53.280	1.949
180	491	54.501	1.993
190	510	56.610	2.071
200	517	57.387	2.099
210	523	58.053	2.123
220	530	58.830	2.152
230	535	59.385	2.172
240	538	59.718	2.184
250	543	60.273	2.205
260	549	60.939	2.229
270	551	61.161	2.237
280	555	61.605	2.253
290	556	61.716	2.257
300	560	62.160	2.274
310	561	62.271	2.278
320	562	62.382	2.282
330	565	62.715	2.294
340	567	62.937	2.302
350	567	62.937	2.302
360	568	63.048	2.306
370	569	63.159	2.310
380	570	63.270	2.314
390	570	63.270	2.314
400	571	63.381	2.318
410	572	63.492	2.322
420	572	63.492	2.322
430	572	63.492	2.322

Uji Geser Langsung Akar Rumput Gunungpati

tanah + ring : 212,9 gr (D 45-45)

cawan : 4,8 gr

cawan + tnh basah : 99,8 gr

cawan + tnh kering : 77,2 gr

luas penampang : 27,3397 cm²

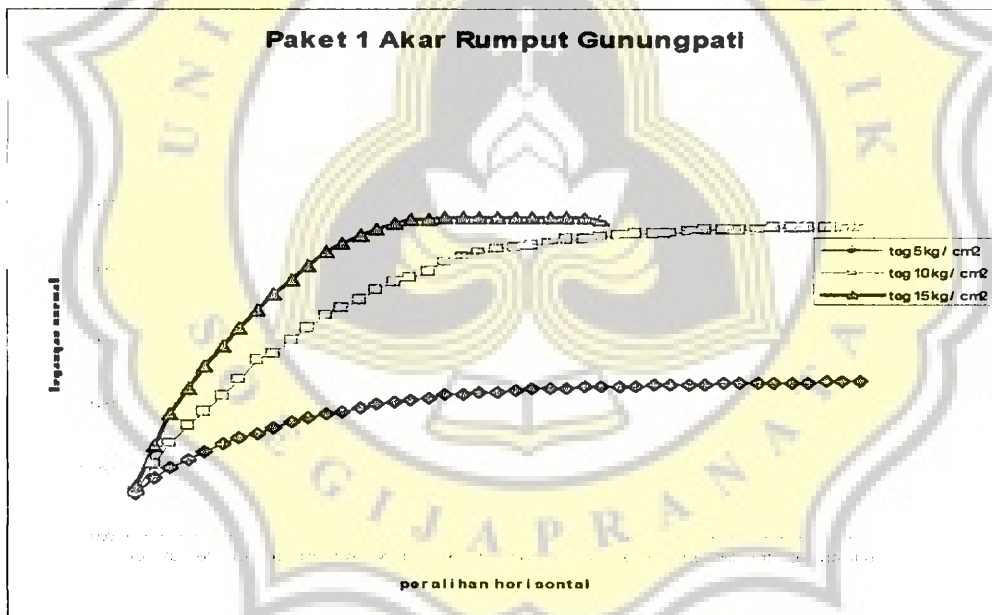
tegangan normal : 15 kg / cm²

kalibrasi : 0,111 kg / div

Tugas Akhir

Efektifitas Akar Tanaman Rumput terhadap Kuat Geser Tanah pada Lereng

kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	93	10.323	0.378
20	168	18.648	0.682
30	227	25.197	0.922
40	275	30.525	1.117
50	316	35.076	1.283
60	354	39.294	1.437
70	388	43.068	1.575
80	419	46.509	1.701
90	448	49.728	1.819
100	475	52.725	1.929
110	501.5	55.667	2.036
120	527	58.497	2.140
130	543	60.273	2.205
140	557	61.827	2.261
150	568	63.048	2.306
160	578	64.158	2.347
170	585	64.935	2.375
180	588	65.268	2.387
190	589	65.379	2.391
200	591	65.601	2.399
210	591	65.601	2.399
220	591.5	65.657	2.402
230	591	65.601	2.399
240	591	65.601	2.399
250	591.5	65.657	2.402
260	592	65.712	2.404
270	591	65.601	2.399
280	587	65.157	2.383



Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lamp - 15

Data laboratorium Uji Geser Langsung tanah yang mengandung akar akar rumput Gunungpati (paket 2)

Uji Geser Langsung Akar Rumput Gunungpati				Uji Geser Langsung Akar Rumput Gunungpati			
tanah + ring : 209,5 gr (D 45-45) cawan : 4,6 gr cawan + tnh basah : 101,1 gr cawan + tnh kering : 71,5 gr luas penampang : 27,3397 cm ² tegangan normal : 5 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				tanah + ring : 214,5 gr (D 45-45) cawan : 4,9 gr cawan + tnh basah : 99,9 gr cawan + tnh kering : 73,2 gr luas penampang : 27,3397 cm ² tegangan normal : 10 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)	Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	49	5.439	0.199	10	72	7.992	0.292
20	51	5.661	0.207	20	113	12.543	0.459
30	51	5.661	0.207	30	149	16.539	0.605
40	51	5.661	0.207	40	177	19.647	0.719
50	93	10.323	0.378	50	200	22.200	0.812
60	112	12.432	0.455	60	225	24.975	0.914
70	127	14.097	0.516	70	246	27.306	0.999
80	143	15.873	0.581	80	268	29.748	1.088
90	158	17.538	0.641	90	290	32.190	1.177
100	172	19.092	0.698	100	307	34.077	1.246
110	185	20.535	0.751	110	324	35.964	1.315
120	195	21.645	0.792	120	343	38.073	1.393
130	205	22.755	0.832	130	358	39.738	1.453
140	215	23.865	0.873	140	371	41.181	1.506
150	222	24.642	0.901	150	382	42.402	1.551
160	230	25.530	0.934	160	392	43.512	1.592
170	237	26.307	0.962	170	401	44.511	1.628
180	243	26.973	0.987	180	408	45.288	1.656
190	249	27.639	1.011	190	418	46.398	1.697
200	253	28.083	1.027	200	423	46.953	1.717
210	256	28.416	1.039	210	426	47.286	1.730
220	260	28.860	1.056	220	430	47.730	1.746
230	264	29.304	1.072	230	433	48.063	1.758

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

240	266	29.526	1.080	240	436	48.396	1.770
250	269	29.859	1.092	250	437	48.507	1.774
260	273	30.303	1.108	260	439	48.729	1.782
270	274	30.414	1.112	270	440	48.840	1.786
280	277	30.747	1.125	280	443	49.173	1.799
290	278	30.858	1.129	290	444	49.284	1.803
300	279	30.969	1.133	300	446	49.506	1.811
310	280	31.080	1.137	310	447	49.617	1.815
320	281	31.191	1.141	320	448	49.728	1.819
330	282	31.302	1.145	330	450	49.950	1.827
340	283	31.413	1.149	340	450.5	50.006	1.829
350	285	31.635	1.157	350	451	50.061	1.831
360	287	31.857	1.165	360	451	50.061	1.831
370	290	32.190	1.177	370	452	50.172	1.835
380	292	32.412	1.186	380	452	50.172	1.835
390	294	32.634	1.194	390	452	50.172	1.835
400	296	32.856	1.202	400	452	50.172	1.835
410	298	33.078	1.210	410			
420	300	33.300	1.218	420			
430	301	33.411	1.222	430			
440	302	33.522	1.226				
450	303	33.633	1.230				
460	304	33.744	1.234				
470	305	33.855	1.238				
480	305	33.855	1.238				
490	306	33.966	1.242				
500	306	33.966	1.242				
510	307	34.077	1.246				
520	308	34.188	1.250				
530	308.5	34.244	1.253				
540	310	34.410	1.259				
550	310	34.410	1.259				
560	310	34.410	1.259				

Uji Geser Langsung Akar Rumput Gunungpati

tanah + ring : 215,8 gr (D 45-45)
 cawan : 4,6 gr
 cawan + tnh basah : 97,5 gr
 cawan + tnh kering : 71,7 gr
 luas penampang : 27,3397 cm²
 tegangan normal : 15 kg / cm²
 kalibrasi : 0,111 kg / div

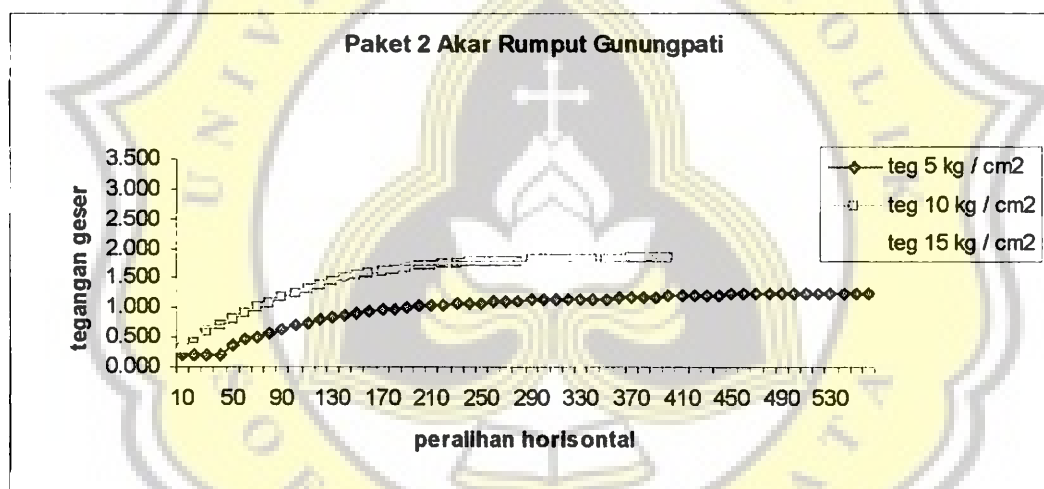
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	91	10.101	0.369
20	155	17.205	0.629
30	210	23.310	0.853
40	267	29.637	1.084

Tugas Akhir

Efektifitas Akar Tanaman Rumput terhadap Kuat Geser Tanah pada Lereng

50	295	32.745	1.198
60	337	37.407	1.368
70	373	41.403	1.514
80	411	45.621	1.669
90	446	49.506	1.811
100	475	52.725	1.929
110	508	56.388	2.062
120	529	58.719	2.148
130	554	61.494	2.249
140	574	63.714	2.330
150	595	66.045	2.416
160	615	68.265	2.497
170	635	70.485	2.578
180	654	72.594	2.655
190	665	73.815	2.700
200	679	75.369	2.757
210	693	76.923	2.814
220	705	78.255	2.862
230	710	78.810	2.883
240	721	80.031	2.927
250	728	80.808	2.956
260	733	81.363	2.976
270	738	81.918	2.996
280	742	82.362	3.013
290	744	82.584	3.021
300	747	82.917	3.033
310	747	82.917	3.033
320	748	83.028	3.037
330	747	82.917	3.033
340	747	82.917	3.033
350	747	82.917	3.033



Lamp - 16

Data laboratorium Uji Geser Langsung tanah yang mengandung akar akar rumput Gunungpati (paket 3)

<p>Uji Geser Langsung Akar Rumput Gunungpati</p> <p>tanah + ring : 210,6 gr (D 45-45)</p> <p>cawan : 4,8 gr</p> <p>cawan + tnh basah : 94 gr</p> <p>cawan + tnh kering : 67,8 gr</p>	<p>Uji Geser Langsung Akar Rumput Gunungpati</p> <p>tanah + ring : 217,8 gr (D 45-45)</p> <p>cawan : 4,7 gr</p> <p>cawan + tnh basah : 102,9 gr</p> <p>cawan + tnh kering : gr</p>
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Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

luas penampang : 27,3397 cm²
 tegangan normal : 5 kg / cm²
 kalibrasi : 0,111 kg / div
 kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	21	2.331	0.085
20	24	2.664	0.097
30	45	4.995	0.183
40	60	6.660	0.244
50	94	10.434	0.382
60	117	12.987	0.475
70	135	14.985	0.548
80	143	15.873	0.581
90	162	17.982	0.658
100	177	19.647	0.719
110	188	20.868	0.763
120	198	21.978	0.804
130	210	23.310	0.853
140	218	24.198	0.885
150	225	24.975	0.914
160	235	26.085	0.954
170	243	26.973	0.987
180	250	27.750	1.015
190	256	28.416	1.039
200	261	28.971	1.060
210	266	29.526	1.080
220	271	30.081	1.100
230	274	30.414	1.112
240	277	30.747	1.125
250	279	30.969	1.133
260	281	31.191	1.141
270	283	31.413	1.149
280	284	31.524	1.153
290	287	31.857	1.165
300	288	31.968	1.169
310	288	31.968	1.169
320	290	32.190	1.177
330	292	32.412	1.186
340	292	32.412	1.186
350	291.5	32.357	1.183
360	293	32.523	1.190

luas penampang : 27,3397 cm²
 tegangan normal : 10 kg / cm²
 kalibrasi : 0,111 kg / div
 kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	77	8.547	0.313
20	123	13.653	0.499
30	162	17.982	0.658
40	194	21.534	0.788
50	222	24.642	0.901
60	247	27.417	1.003
70	270	29.970	1.096
80	290	32.190	1.177
90	311	34.521	1.263
100	335	37.185	1.360
110	352	39.072	1.429
120	370	41.070	1.502
130	382	42.402	1.551
140	396	43.956	1.608
150	408	45.288	1.656
160	420	46.620	1.705
170	430	47.730	1.746
180	440	48.840	1.786
190	445	49.395	1.807
200	451	50.061	1.831
210	462	51.282	1.876
220	468	51.948	1.900
230	476	52.836	1.933
240	481	53.391	1.953
250	487	54.057	1.977
260	492	54.612	1.998
270	496	55.056	2.014
280	500	55.500	2.030
290	507	56.277	2.058
300	510	56.610	2.071
310	511	56.721	2.075
320	515	57.165	2.091
330	519	57.609	2.107
340	522	57.942	2.119
350	527	58.497	2.140
360	531	58.941	2.156

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

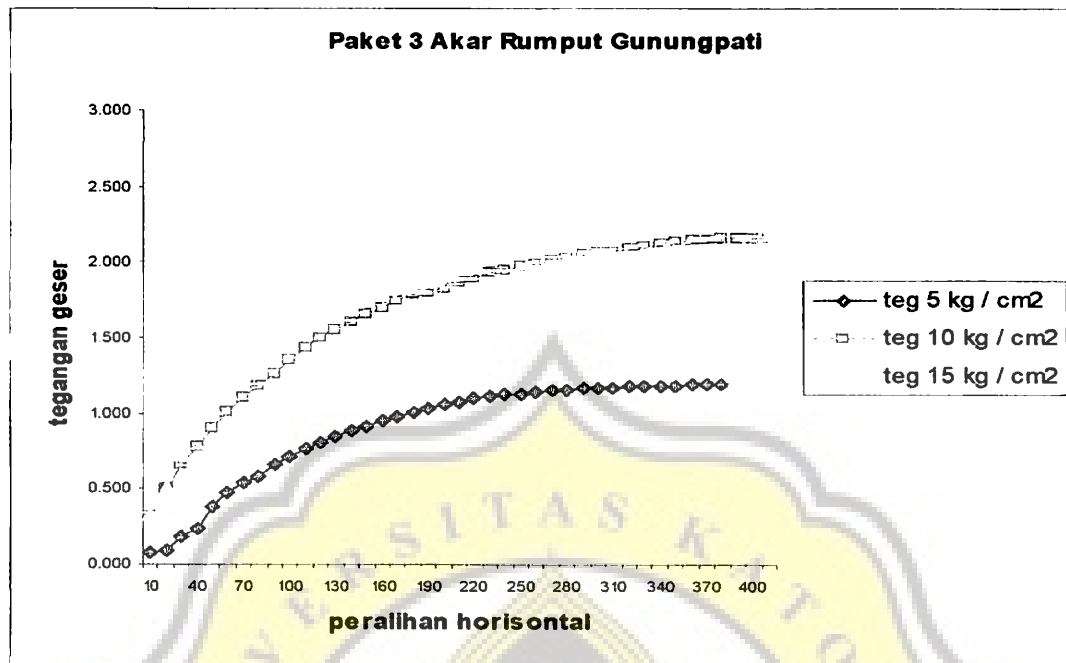
370	293	32.523	1.190
380	293	32.523	1.190

370	531	58.941	2.156
380	531.5	58.997	2.158
390	532	59.052	2.160
400	532	59.052	2.160
410	532	59.052	2.160

Uji Geser Langsung Akar Rumput Gunungpati			
tanah + ring : 205,9 gr (D 45-45)			
cawan : 4,8 gr			
cawan + tnh basah : 93,6 gr			
cawan + tnh kering : 71,1 gr			
luas penampang : 27,3397 cm ²			
tegangan normal : 15 kg / cm ²			
kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	82	9.102	0.333
20	125	13.875	0.508
30	180	19.980	0.731
40	220	24.420	0.893
50	255	28.305	1.035
60	288	31.968	1.169
70	320	35.520	1.299
80	360	39.960	1.462
90	385	42.735	1.563
100	415	46.065	1.685

110	440	48.840	1.786
120	461	51.171	1.872
130	490	54.390	1.989
140	511	56.721	2.075
150	536	59.496	2.176
160	555	61.605	2.253
170	573	63.603	2.326
180	592	65.712	2.404
190	605	67.155	2.456
200	620	68.820	2.517
210	632	70.152	2.566
220	645	71.595	2.619
230	654	72.594	2.655
240	660	73.260	2.680
250	671	74.481	2.724
260	677	75.147	2.749
270	682	75.702	2.769
280	689	76.479	2.797
290	691	76.701	2.805
300	693	76.923	2.814
310	697	77.367	2.830
320	698	77.478	2.834
330	698	77.478	2.834
340	698	77.478	2.834

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng



Lamp - 17

Data laboratorium Uji Geser Langsung tanah yang tidak mengandung akar akar rumput Gunungpati

Uji Geser Langsung Akar Rumput Gunungpati				Uji Geser Langsung Akar Rumput Gunungpati			
tanah + ring : 209,5 gr (D 45-45)				tanah + ring : 214,5 gr (D 45-45)			
cawan : 4,6 gr				cawan : 4,9 gr			
cawan + tnh basah : 105,1 gr				cawan + tnh basah : 102,4 gr			
cawan + tnh kering : 76,2 gr				cawan + tnh kering : 80,2 gr			
luas penampang : 27,3397 cm ²				luas penampang : 27,3397 cm ²			
tegangan normal : 5 kg / cm ²				tegangan normal : 10 kg / cm ²			
kalibrasi : 0,111 kg / div				kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan	Load Dial	Beban	Tegangan	Peralihan	Load Dial	Beban	Tegangan
Horisontal	Reading	Horisontal	Geser	Horisontal	Reading	Horisontal	Geser
(mm)	(div)	(kg)	(kg / cm ²)	(mm)	(div)	(kg)	(kg / cm ²)
10	25	2.775	0.102	10	40	4.440	0.162
20	44	4.884	0.179	20	56	6.216	0.227

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

30	58	6.438	0.235
40	74	8.214	0.300
50	82	9.102	0.333
60	92	10.212	0.374
70	97	10.767	0.394
80	105	11.655	0.426
90	110	12.210	0.447
100	125	13.875	0.508
110	130	14.430	0.528
120	135	14.985	0.548
130	145	16.095	0.589
140	155	17.205	0.629
150	165	18.315	0.670
160	170	18.870	0.690
170	177	19.647	0.719
180	183	20.313	0.743
190	189	20.979	0.767
200	193	21.423	0.784
210	197	21.867	0.800
220	201	22.311	0.816
230	204	22.644	0.828
240	206	22.866	0.836
250	209	23.199	0.849
260	212	23.532	0.861
270	214	23.754	0.869
280	218	24.198	0.885
290	218	24.198	0.885
300	219	24.309	0.889
310	220	24.420	0.893
320	221	24.531	0.897
330	222	24.642	0.901
340	223	24.753	0.905
350	225	24.975	0.914
360	226	25.086	0.918
370	230	25.530	0.934
380	232	25.752	0.942
390	234	25.974	0.950
400	236	26.196	0.958
410	238	26.418	0.966
420	240	26.640	0.974
430	241	26.751	0.978
440	242	26.862	0.983
450	243	26.973	0.987
460	243	26.973	0.987

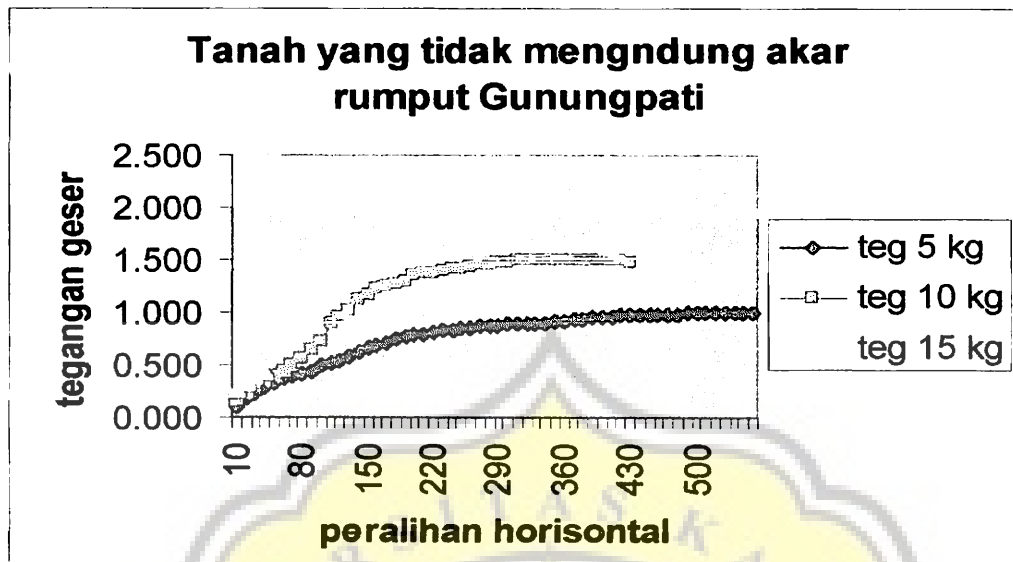
30	70	7.770	0.284
40	88	9.768	0.357
50	99	10.989	0.402
60	110	12.210	0.447
70	125	13.875	0.508
80	140	15.540	0.568
90	160	17.760	0.650
100	180	19.980	0.731
110	221	24.531	0.897
120	238	26.418	0.966
130	254	28.194	1.031
140	276	30.636	1.121
150	288	31.968	1.169
160	303	33.633	1.230
170	310	34.410	1.259
180	315	34.965	1.279
190	320	35.520	1.299
200	335	37.185	1.360
210	338	37.518	1.372
220	340	37.740	1.380
230	345	38.295	1.401
240	348	38.628	1.413
250	350	38.850	1.421
260	355	39.405	1.441
270	358	39.738	1.453
280	360	39.960	1.462
290	362	40.182	1.470
300	365	40.515	1.482
310	367	40.737	1.490
320	369	40.959	1.498
330	370	41.070	1.502
340	370	41.070	1.502
350	371	41.181	1.506
360	371	41.181	1.506
370	371	41.181	1.506
380	370	41.070	1.502
390	369	40.959	1.498
400	368	40.848	1.494
410	367	40.737	1.490
420	367	40.737	1.490
430	365	40.515	1.482

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

470	243	26.973	0.987
480	243.5	27.029	0.989
490	244	27.084	0.991
500	244	27.084	0.991
510	245	27.195	0.995
520	245	27.195	0.995
530	245	27.195	0.995
540	246	27.306	0.999
550	245	27.195	0.995
560	245	27.195	0.995

Uji Geser Langsung Akar Rumput Gunungpati				110	315	34.965	1.279
tanah + ring : 215,8 gr (D 45-45)				120	330	36.630	1.340
cawan : 4,6 gr				130	355	39.405	1.441
cawan + trnh basah : 99,5 gr				140	368	40.848	1.494
cawan + trnh kering : 73,2 gr				150	384	42.624	1.559
luas penampang : 27,3397 cm ²				160	400	44.400	1.624
tegangan normal : 15 kg / cm ²				170	425	47.175	1.726
kalibrasi : 0,111 kg / div				180	442	49.062	1.795
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				190	460	51.060	1.868
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)	200	488	54.168	1.981
10	68	7.548	0.276	210	500	55.500	2.030
20	80	8.880	0.325	220	520	57.720	2.111
30	98	10.878	0.398	230	530	58.830	2.152
40	110	12.210	0.447	240	535	59.385	2.172
50	150	16.650	0.609	250	536	59.496	2.176
60	200	22.200	0.812	260	537	59.607	2.180
70	230	25.530	0.934	270	538	59.718	2.184
80	260	28.860	1.056	280	538	59.718	2.184
90	289	32.079	1.173	290	539	59.829	2.188
100	300	33.300	1.218	300	540	59.940	2.192
				310	541	60.051	2.196
				320	542	60.162	2.201
				330	540	59.940	2.192
				340	540	59.940	2.192
				350	540	59.940	2.192

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng



Data laboratorium Uji Geser Langsung tanah yang mengandung akar rumput Tembalang (paket 1)

Uji Geser Langsung Akar Rumput Tembalang				Uji Geser Langsung Akar Rumput Tembalang			
tanah + ring : 211,8 gr (D 45-45)				tanah + ring : 212,2 gr (D 45-45)			
cawan : 4,9 gr				cawan : 4,8 gr			
cawan + tnh basah : 102,4 gr				cawan + tnh basah : 101,6 gr			
cawan + tnh kering : 69,7 gr				cawan + tnh kering : 79,7 gr			
luas penampang : 27,3397 cm ²				luas penampang : 27,3397 cm ²			
tegangan normal : 5 kg / cm ²				tegangan normal : 10 kg / cm ²			
kalibrasi : 0,111 kg / div				kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)	Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	63	6.993	0.256	10	95	10.545	0.386
20	75	8.325	0.305	20	175	19.425	0.711
30	85	9.435	0.345	30	223	24.753	0.905
40	93	10.323	0.378	40	260	28.860	1.056
50	107	11.877	0.434	50	294	32.634	1.194
60	126	13.986	0.512	60	323	35.853	1.311
70	135	14.985	0.548	70	350	38.850	1.421
80	148	16.428	0.601	80	380	42.180	1.543

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

90	160	17.760	0.650
100	170	18.870	0.690
110	178	19.758	0.723
120	185	20.535	0.751
130	195	21.645	0.792
140	202	22.422	0.820
150	208	23.088	0.844
160	214	23.754	0.869
170	220	24.420	0.893
180	222	24.642	0.901
190	222	24.642	0.901
200	225	24.975	0.914
210	227	25.197	0.922
220	229	25.419	0.930
230	230	25.530	0.934
240	231	25.641	0.938
250	233	25.863	0.946
260	235	26.085	0.954
270	236	26.196	0.958
280	238	26.418	0.966
290	240	26.640	0.974
300	241	26.751	0.978
310	241	26.751	0.978
320	241	26.751	0.978
330	240	26.640	0.974
340	239	26.529	0.970

90	405	44.955	1.644
100	425	47.175	1.726
110	445	49.395	1.807
120	468	51.948	1.900
130	475	52.725	1.929
140	490	54.390	1.989
150	510	56.610	2.071
160	517	57.387	2.099
170	526	58.386	2.136
180	531	58.941	2.156
190	534	59.274	2.168
200	540	59.940	2.192
210	541	60.051	2.196
220	542	60.162	2.201
230	544	60.384	2.209
240	547	60.717	2.221
250	551	61.161	2.237
260	554	61.494	2.249
270	557	61.827	2.261
280	558	61.938	2.265
290	558	61.938	2.265
300	559	62.049	2.270
310	559	62.049	2.270
320	559	62.049	2.270

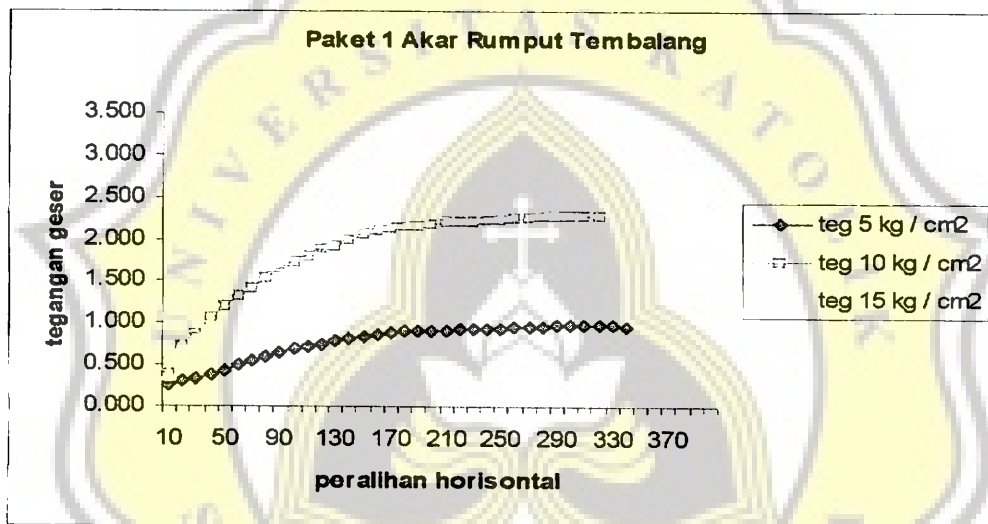
Uji Geser Langsung Akar Rumput Tembalang			
tanah + ring : 213,4 gr (D 45-45)			
cawan : 4,7 gr			
cawan + tnh basah : 100,8 gr			
cawan + tnh kering : 78,4 gr			
luas penampang : 27,3397 cm ²			
tegangan normal : 15 kg / cm ²			
kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan	Load Dial	Beban	Tegangan
Horisontal	Reading	Horisontal	Geser
(mm)	(div)	(kg)	(kg / cm ²)
10	93	10.323	0.378

20	175	19.425	0.711
30	255	28.305	1.035
40	315	34.965	1.279
50	357	39.627	1.449
60	397	44.067	1.612
70	435	48.285	1.766
80	468	51.948	1.900
90	500	55.500	2.030
100	527	58.497	2.140
110	552	61.272	2.241
120	575	63.825	2.335
130	595	66.045	2.416
140	620	68.820	2.517
150	642	71.262	2.607
160	662	73.482	2.688
170	673	74.703	2.732
180	687	76.257	2.789

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

190	700	77.700	2.842
200	712	79.032	2.891
210	723	80.253	2.935
220	730	81.030	2.964
230	736	81.696	2.988
240	745	82.695	3.025
250	750	83.250	3.045
260	754	83.694	3.061
270	759	84.249	3.082
280	764	84.804	3.102
290	766	85.026	3.110
300	771	85.581	3.130

310	774	85.914	3.142
320	775	86.025	3.147
330	776	86.136	3.151
340	780	86.580	3.167
350	785	87.135	3.187
360	786	87.246	3.191
370	786	87.246	3.191
380	787	87.357	3.195
390	787	87.357	3.195
400	787	87.357	3.195



Lamp - 19

Data laboratorium Uji Geser Langsung tanah yang mengandung akar akar rumput Tembalang (paket 2)

<p>Uji Geser Langsung Akar Rumput Tembalang</p> <p>tanah + ring : 213,1 gr (D 45-45) cawan : 4,8 gr cawan + tnh basah : 102,4 gr cawan + tnh kering : 84,9 gr luas penampang : 27,3397 cm² tegangan normal : 5 kg / cm² kalibrasi : 0,111 kg / div</p>	<p>Uji Geser Langsung Akar Rumput Tembalang</p> <p>tanah + ring : 228,8 gr (D 45-45) cawan : 4,7 gr cawan + tnh basah : 105,9 gr cawan + tnh kering : 85,1 gr luas penampang : 27,3397 cm² tegangan normal : 10 kg / cm² kalibrasi : 0,111 kg / div</p>
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Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	65	7.215	0.264
20	90	9.990	0.365
30	123	13.653	0.499
40	143	15.873	0.581
50	161	17.871	0.654
60	175	19.425	0.711
70	190	21.090	0.771
80	203	22.533	0.824
90	212	23.532	0.861
100	222	24.642	0.901
110	225	24.975	0.914
120	237	26.307	0.962
130	242	26.862	0.983
140	250	27.750	1.015
150	255	28.305	1.035
160	263	29.193	1.068
170	269	29.859	1.092
180	277	30.747	1.125
190	287	31.857	1.165
200	295	32.745	1.198
210	300	33.300	1.218
220	306	33.966	1.242
230	313	34.743	1.271
240	320	35.520	1.299
250	328	36.408	1.332
260	332	36.852	1.348
270	335	37.185	1.360
280	338	37.518	1.372
290	339	37.629	1.376
300	340	37.740	1.380
310	342	37.962	1.389
320	342	37.962	1.389
330	343	38.073	1.393
340	343	38.073	1.393
350	343	38.073	1.393

kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	50	5.550	0.203
20	50	5.550	0.203
30	47	5.217	0.191
40	50	5.550	0.203
50	90	9.990	0.365
60	125	13.875	0.508
70	180	19.980	0.731
80	245	27.195	0.995
90	290	32.190	1.177
100	310	34.410	1.259
110	335	37.185	1.360
120	360	39.960	1.462
130	375	41.625	1.523
140	390	43.290	1.583
150	402	44.622	1.632
160	414	45.954	1.681
170	429	47.619	1.742
180	445	49.395	1.807
190	460	51.060	1.868
200	470	52.170	1.908
210	483	53.613	1.961
220	490	54.390	1.989
230	499	55.389	2.026
240	505	56.055	2.050
250	509	56.499	2.067
260	524	58.164	2.127
270	535	59.385	2.172
280	544	60.384	2.209
290	555	61.605	2.253
300	560	62.160	2.274
310	566	62.826	2.298
320	567	62.937	2.302
330	567	62.937	2.302
340	567	62.937	2.302
350	565	62.715	2.294

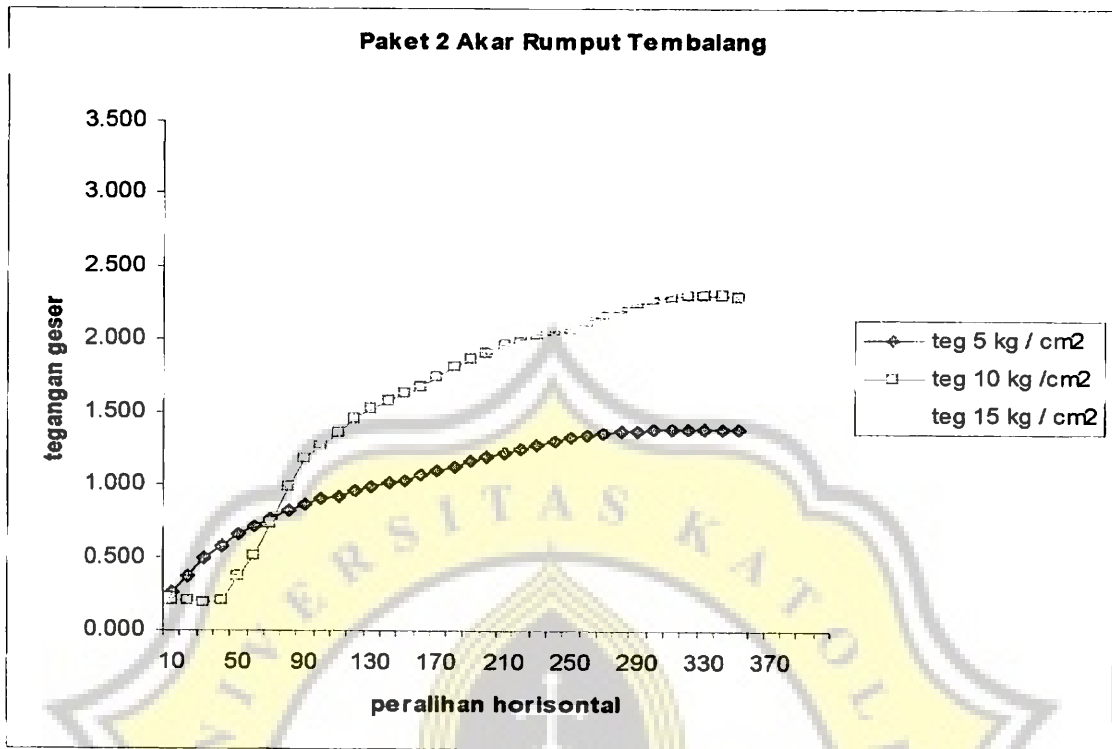
Uji Geser Langsung Akar Rumput Gunungpati

tanah + ring : 224,8 gr (D 45-45)
 cawan : 4,9 gr
 cawan + tnh basah : 104,8 gr

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

cawan + tnh kering : 85,4 gr luas penampang : 27,3397 cm ² tegangan normal : 15 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				170	585	64.935	2.375
				180	605	67.155	2.456
				190	635	70.485	2.578
				200	665	73.815	2.700
				210	710	78.810	2.883
				220	718	79.698	2.915
				230	724	80.364	2.939
				240	730	81.030	2.964
				250	740	82.140	3.004
				260	762	84.582	3.094
				270	770	85.470	3.126
				280	775	86.025	3.147
				290	780	86.580	3.167
				300	785	87.135	3.187
				310	788	87.468	3.199
				320	795	88.245	3.228
				330	797	88.467	3.236
				340	798	88.578	3.240
				350	799	88.669	3.244
				360	800	88.800	3.248
				370	800	88.800	3.248
				380	800	88.800	3.248
				390	798	88.578	3.240
				400	798	88.578	3.240
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)				
10	105	11.655	0.426				
20	205	22.755	0.832				
30	245	27.195	0.995				
40	280	31.080	1.137				
50	315	34.965	1.279				
60	345	38.295	1.401				
70	374	41.514	1.518				
80	396	43.956	1.608				
90	420	46.620	1.705				
100	440	48.840	1.786				
110	460	51.060	1.868				
120	477	52.947	1.937				
130	505	56.055	2.050				
140	515	57.165	2.091				
150	545	60.495	2.213				
160	565	62.715	2.294				

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng



Lamp - 20

Data laboratorium Uji Geser Langsung tanah yang mengandung akar akar rumput Tembalang (paket 3)

Uji Geser Langsung Akar Rumput Tembalang	Uji Geser Langsung Akar Rumput Tembalang
tanah + ring : 225,1 gr (D 45-45)	tanah + ring : 237 gr (D 45-45)
cawan : 4,7 gr	cawan : 4,8 gr
cawan + tnh basah : 113,1 gr	cawan + tnh basah : 117,6 gr
cawan + tnh kering : 85,2 gr	cawan + tnh kering : 91,7 gr

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

luas penampang : 27,3397 cm ²				luas penampang : 27,3397 cm ²			
tegangan normal : 5 kg / cm ²				tegangan normal : 10 kg / cm ²			
kalibrasi : 0,111 kg / div				kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan	Load Dial	Beban	Tegangan	Peralihan	Load Dial	Beban	Tegangan
Horisontal	Reading	Horisontal	Geser	Horisontal	Reading	Horisontal	Geser
(mm)	(div)	(kg)	(kg / cm ²)	(mm)	(div)	(kg)	(kg / cm ²)
10	85	9.435	0.345	10	80	8.880	0.325
20	135	14.985	0.548	20	125	13.875	0.508
30	160	17.760	0.650	30	150	16.650	0.609
40	178	19.758	0.723	40	170	18.870	0.690
50	191	21.201	0.775	50	205	22.755	0.832
60	200	22.200	0.812	60	225	24.975	0.914
70	215	23.865	0.873	70	242	26.862	0.983
80	222	24.642	0.901	80	257	28.527	1.043
90	227	25.197	0.922	90	270	29.970	1.096
100	232	25.752	0.942	100	281	31.191	1.141
110	239	26.529	0.970	110	289	32.079	1.173
120	246	27.306	0.999	120	300	33.300	1.218
130	250	27.750	1.015	130	310	34.410	1.259
140	254	28.194	1.031	140	320	35.520	1.299
150	257	28.527	1.043	150	329	36.519	1.336
160	260	28.860	1.056	160	338	37.518	1.372
170	264	29.304	1.072	170	345	38.295	1.401
180	266	29.526	1.080	180	350	38.850	1.421
190	268	29.748	1.088	190	359	39.849	1.458
200	271	30.081	1.100	200	364	40.404	1.478
210	273	30.303	1.108	210	369	40.959	1.498
220	275	30.525	1.117	220	375	41.625	1.523
230	276	30.636	1.121	230	380	42.180	1.543
240	278	30.858	1.129	240	382	42.402	1.551
250	280	31.080	1.137	250	389	43.179	1.579
260	282	31.302	1.145	260	394	43.734	1.600
270	284	31.524	1.153	270	397	44.067	1.612
280	285	31.635	1.157	280	402	44.622	1.632
290	286	31.746	1.161	290	403	44.733	1.636
300	288	31.968	1.169	300	406	45.066	1.648
310	289	32.079	1.173	310	412	45.732	1.673
320	290	32.190	1.177	320	416	46.176	1.689
330	292	32.412	1.186	330	418	46.398	1.697
340	293	32.523	1.190	340	421	46.731	1.709
350	294	32.634	1.194	350	423	46.953	1.717
360	295	32.745	1.198	360	426	47.286	1.730

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

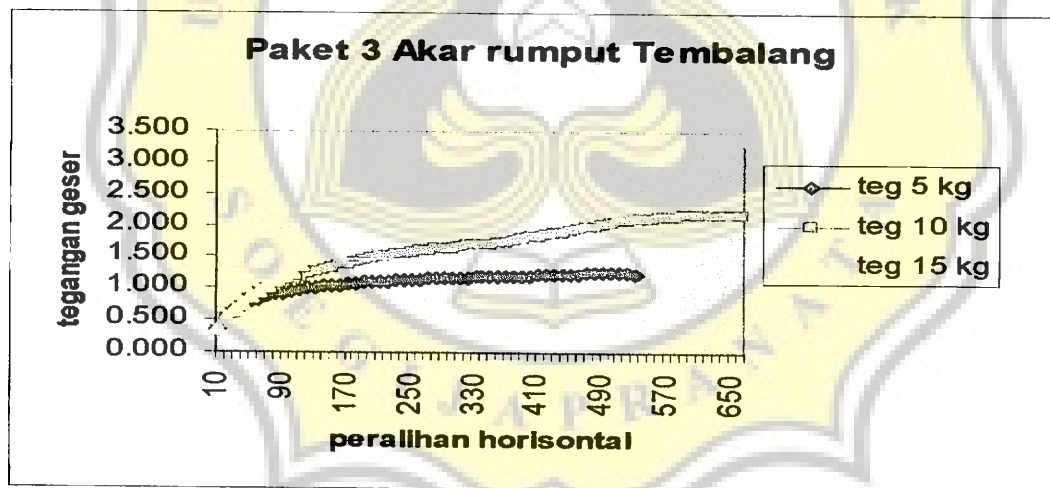
370	296	32.856	1.202	370	428	47.508	1.738
380	297	32.967	1.206	380	435	48.285	1.766
390	298	33.078	1.210	390	442	49.062	1.795
400	299	33.189	1.214	400	447	49.617	1.815
410	301	33.411	1.222	410	452	50.172	1.835
420	303	33.633	1.230	420	456	50.616	1.851
430	304	33.744	1.234	430	463	51.393	1.880
440	305	33.855	1.238	440	468	51.948	1.900
450	306	33.966	1.242	450	472	52.392	1.916
460	306	33.966	1.242	460	480	53.280	1.949
470	307	34.077	1.246	470	486	53.946	1.973
480	308	34.188	1.250	480	490	54.390	1.989
490	308	34.188	1.250	490	496	55.056	2.014
500	308	34.188	1.250	500	505	56.055	2.050
510	307	34.077	1.246	510	512	56.832	2.079
520	307	34.077	1.246	520	515	57.165	2.091
530	306	33.966	1.242	530	518	57.498	2.103
				540	521	57.831	2.115
				550	524	58.164	2.127
				560	525	58.275	2.132
				570	527	58.497	2.140
				580	530	58.830	2.152
				590	532	59.052	2.160
				600	534	59.274	2.168
				610	535	59.385	2.172
				620	536	59.496	2.176
				630	536	59.496	2.176
				640	535	59.385	2.172
				650	534	59.274	2.168
				660	533	59.163	2.164

Uji Geser Langsung Akar Rumput Tembalang			
tanah + ring : 200,9 gr (D 45-45)			
cawan : 4,7 gr			
cawan + tnh basah : 85,1 gr			
cawan + tnh kering : 60,4 gr			
luas penampang : 27,3397 cm ²			
tegangan normal : 15 kg / cm ²			
kalibrasi : 0,111 kg / div			
kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan	Load Dial	Beban	Tegangan

Horizontal (mm)	Reading (div)	Horizontal (kg)	Geser (kg / cm ²)
10	90	9.990	0.365
20	135	14.985	0.548
30	165	18.315	0.670
40	190	21.090	0.771
50	215	23.865	0.873
60	235	26.085	0.954
70	255	28.305	1.035
80	277	30.747	1.125
90	297	32.967	1.206
100	310	34.410	1.259
110	345	38.295	1.401

Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

120	365	40.515	1.482	330	717	79.587	2.911
130	387	42.957	1.571	340	725	80.475	2.944
140	410	45.510	1.665	350	742	82.362	3.013
150	420	46.620	1.705	360	751	83.361	3.049
160	450	49.950	1.827	370	760	84.360	3.086
170	468	51.948	1.900	380	769	85.359	3.122
180	486	53.946	1.973	390	774	85.914	3.142
190	505	56.055	2.050	400	779	86.469	3.163
200	522	57.942	2.119	410	782	86.802	3.175
210	538	59.718	2.184	420	783	86.913	3.179
220	555	61.605	2.253	430	784	87.024	3.183
230	570	63.270	2.314	440	785	87.135	3.187
240	585	64.935	2.375	450	787	87.357	3.195
250	595	66.045	2.416	460	788	87.468	3.199
260	608	67.488	2.468	470	789	87.579	3.203
270	620	68.820	2.517	480	789	87.579	3.203
280	635	70.485	2.578	490	789	87.579	3.203
290	648	71.928	2.631	500	787	87.357	3.195
300	660	73.260	2.680	510	786	87.246	3.191
310	683	75.813	2.773	520	781	86.691	3.171
320	701	77.811	2.846				



Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Lamp - 21

**Data laboratorium Uji Geser Langsung tanah yang tidak mengandung akar
akar rumput Tembalang**

Uji Geser Langsung Tanah Asli Tembalang				Uji Geser Langsung Tanah Asli Tembalang			
tanah + ring : 231,3 gr (D 45-45) cawan : 4,8 gr cawan + tnh basah : 101,5 gr cawan + tnh kering : 75,2 gr luas penampang : 27,3397 cm ² tegangan normal : 5 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div				tanah + ring : 221,7 gr (D 45-45) cawan : 4,8 gr cawan + tnh basah : 98,9 gr cawan + tnh kering : 76,3 gr luas penampang : 27,3397 cm ² tegangan normal : 10 kg / cm ² kalibrasi : 0,111 kg / div kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div			
Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)	Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	75	8.325	0.305	10	94	10.434	0.382
20	93	10.323	0.378	20	139	15.429	0.564
30	103	11.433	0.418	30	169	18.759	0.686
40	110	12.210	0.447	40	193	21.423	0.784
50	117	12.987	0.475	50	203	22.533	0.824
60	126	13.986	0.512	60	223	24.753	0.905
70	126	13.986	0.512	70	240	26.640	0.974
80	129	14.319	0.524	80	255	28.305	1.035
90	132	14.652	0.536	90	273	30.303	1.108
100	136	15.096	0.552	100	289	32.079	1.173
110	140	15.540	0.568	110	307	34.077	1.246
120	142	15.762	0.577	120	319	35.409	1.295
130	145	16.095	0.589	130	330	36.630	1.340
140	147	16.317	0.597	140	345	38.295	1.401
150	149	16.539	0.605	150	356	39.516	1.445
160	149	16.539	0.605	160	367	40.737	1.490
170	148	16.428	0.601	170	384	42.624	1.559
180	147	16.317	0.597	180	393	43.623	1.596
190	147	16.317	0.597	190	404	44.844	1.640
				200	412	45.732	1.673
				210	421	46.731	1.709
				220	425	47.175	1.726
				230	433	48.063	1.758
				240	434	48.174	1.762
				250	434	48.174	1.762

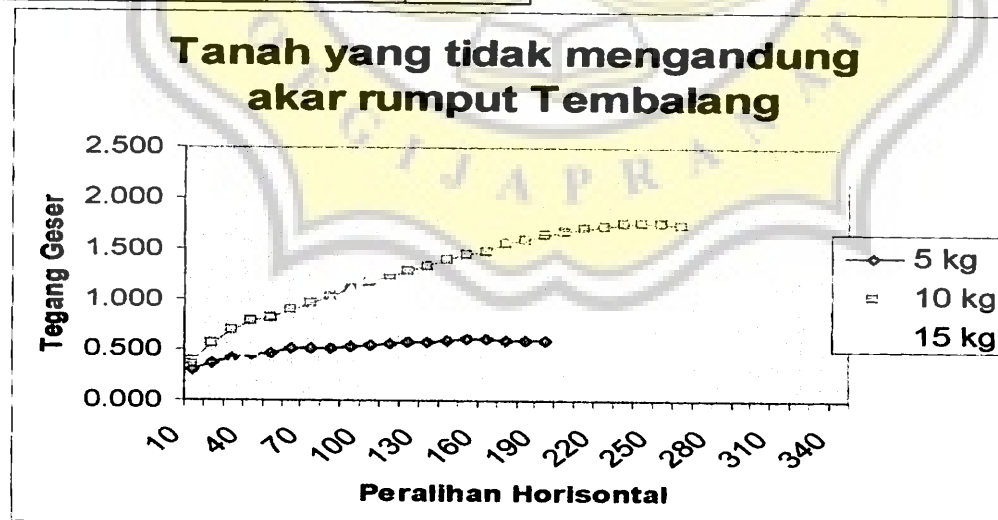
Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng

Uji Geser Langsung Tanah Asli Tembalang

tanah + ring : 226,8 gr (D 45-45)
 cawan : 4,8 gr
 cawan + tnh basah : 93,9 gr
 cawan + tnh kering : 74,6 gr
 luas penampang : 27,3397 cm²
 tegangan normal : 15 kg / cm²
 kalibrasi : 0,111 kg / div
 kecepatan peralihan : 0,0089 mm / div = 0,01 mm / div

Peralihan Horizontal (mm)	Load Dial Reading (div)	Beban Horizontal (kg)	Tegangan Geser (kg / cm ²)
10	30	3.330	0.122
20	56	6.216	0.227
30	92	10.212	0.374
40	125	13.875	0.508
50	157	17.427	0.637
60	185	20.535	0.751
70	220	24.420	0.893
80	243	26.973	0.987
90	272	30.192	1.104
100	301	33.411	1.222
110	324	35.964	1.315
120	350	38.850	1.421

260	431	47.841	1.750
130	378	41.958	1.535
140	390	43.290	1.583
150	409	45.399	1.661
160	423	46.953	1.717
170	434	48.174	1.762
180	449	49.839	1.823
190	456	50.616	1.851
200	471	52.281	1.912
210	482	53.502	1.957
220	493	54.723	2.002
230	500	55.500	2.030
240	510	56.610	2.071
250	516	57.276	2.095
260	520	57.720	2.111
270	529	58.719	2.148
280	535	59.385	2.172
290	541	60.051	2.196
300	547	60.717	2.221
310	544	60.384	2.209
320	545	60.495	2.213
330	545	60.495	2.213
340	540	59.940	2.192



Tugas Akhir
Efektifitas Akar Tanaman Rumput
terhadap Kuat Geser Tanah pada Lereng