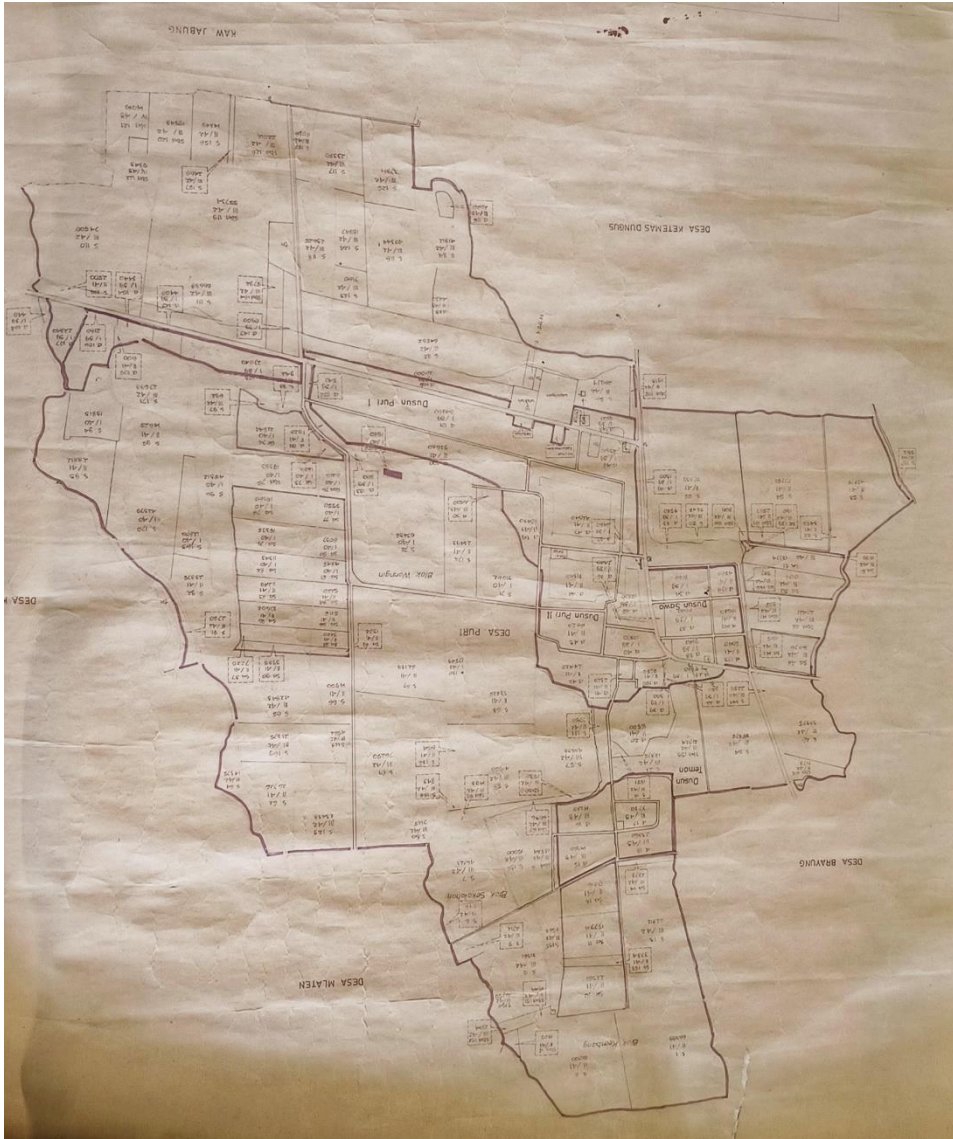


LAMPIRAN

Lampiran 1 Peta Lokasi Desa Puri



Lampiran 2 Sumur bor air dangkal



Sumur Bor 1



Sumur Bor 2



Sumur Bor 3



Sumur Bor 4



Sumur Bor 5



Sumur Bor 6

Lampiran 3 Perhitungan Debit Andalan 2012

PERHITUNGAN DEBIT ANDALAN 2012													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	mm	312	218	218	120	130	44	0	0	0	0	204	493
2		21	14	14	8	5	2	0	0	0	0	7	17
Evapotranspirasi Terbatas													
3	mm	3,3062346	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414309	5,42600301	4,8896992	3,77938376	3,60618408
4	%	30	30	30	30	30	30	30	30	30	30	30	30
5	$dE/Eto = (m/20)^*(18-n)$	-0,05	0,065	0,065	0,155	0,19	0,245	0,27	0,27	0,27	0,27	0,16	0,01
6	dE	-0,165312	0,208024	0,210495	0,492223	0,64079	0,837178	1,049314	1,348221863	1,46502081	1,3202188	0,6047014	0,03606184
7	mm	3,4715464	2,992345	3,027889	2,44899	2,745811	2,579874	2,837035	3,645192446	3,9609822	3,5694804	3,17468236	3,57012224
Water Balance													
8	mm	309	215	215	117	127	41	-3	-4	-4	-4	201	489
9	mm	31,2	21,8	21,76667	11,96667	12,96667	4,36667	0	0	0	0	20,4	49,2666667
10	mm	277	193	193	105	114	37	-3	-4	-4	-4	180	440
11	mmHg	427	343	343	255	264	187	147	146	146	146	330	590
12	mm	31	22	22	12	13	4	0	0	0	0	20	49
Run Off and Water Storage													
13	mm	12,48	8,72	8,706667	4,786667	5,186667	1,746667	0	0	0	0	8,16	19,7066667
14	mm	4,992	3,488	3,482667	1,914667	2,074667	0,698667	0	0	0	0	3,264	7,88266667
15	mm	6,3061333	3,9936	2,7904	2,786133	1,531733	1,659733	0,558933	0	0	0	0	2,6112
16	mm	11,298133	7,4816	6,273067	4,7008	3,6064	2,3584	0,558933	0	0	0	3,264	10,4938667
17	mm	-4,992	-3,488	-3,48267	-1,91467	-2,07467	-0,69867	0	0	0	0	-3,264	-7,8826667
18	mm	17,472	12,208	12,18933	6,701333	7,261333	2,445333	0	0	0	0	11,424	27,5893333
19	mm	19	13	13	7	8	3	0	0	0	0	12	30
20	mm	36	25	25	14	15	5	0	0	0	0	24	57
21	m ³ /blh	43,4304	30,345,6	30,299,2	16,657,6	18,049,6	6,078,4	0	0	0	0	28,396,8	68,79,2
22	m ³ /dtk	0,1621505	0,012111	0,011312	0,006427	0,006739	0,002345	0	0	0	0	0,01095556	0,02560454
23	Jumlah Hari	31	29	31	30	31	30	31	31	30	31	30	31

Lampiran 4 Perhitungan Debit Andalan 2013

PERHITUNGAN DEBIT ANDALAN 2013													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	Curah Hujan (R)	557	333	365	390	309	239	108	0	0	0	150	493
2	Hari Hujan (n)	20	13	14	14	11	11	4	0	0	0	8	17
Evapotranspirasi Terbatas													
3	Evapotranspirasi	3,306235	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414	5,426003	4,889699	3,779384	3,606184
4	Lahan Terbuka	%	30	30	30	30	30	30	30	30	30	30	30
5	$dE/E_0 = (m/20)^*(18-n)$		-0,03	0,07	0,055	0,065	0,11	0,215	0,27	0,27	0,27	0,145	0,01
6	dE	-0,09919	0,224026	0,178111	0,188384	0,338989	0,375876	0,835565	1,348222	1,465021	1,320219	0,548011	0,036062
7	$E_0 = E_0 - De$	3,405422	2,976343	3,060273	2,709829	3,030902	3,041176	3,050784	3,645192	3,960982	3,569948	3,231373	3,570122
Water Balance													
8	$S = R - Ed$	554	330	362	388	306	236	105	-4	-4	-4	146	489
9	Run Off Storm	55,7	33,26667	36,5	39,03333	30,86667	23,86667	10,76667	0	0	0	14,96667	49,26667
10	Soil Storage (IS)	498	296	325	349	275	212	94	-4	-4	-4	131	440
11	Soil Moisture = IS+SMC ; SMC=1/50	648	446	475	499	425	362	244	146	146	146	281	590
12	Water Surplus	56	33	37	39	31	24	11	0	0	0	15	49
Run Off and Water Storage													
13	Infiltrasi (I), I=0.4	22,28	13,30667	14,6	15,61333	12,34667	9,546667	4,306667	0	0	0	5,986667	19,70667
14	$0,5*I*(1+k)$, k=0.8	8,912	5,322667	5,84	6,245333	4,938667	3,818667	1,722667	0	0	0	2,394667	7,882667
15	$k*V(n-1)$	6,306133	7,1296	4,258133	4,672	4,996267	3,959933	3,054933	1,378133	0	0	0	1,915733
16	Storage Volume (Vn)	15,21813	12,45227	10,09813	10,91733	9,934933	7,7696	4,7776	1,378133	0	0	2,394667	9,7984
17	$dV_n = (k*V(n-1)) - V_n$	-8,912	-5,32267	-5,84	-6,24533	-4,93867	-3,81867	-1,72267	0	0	0	-2,39467	-7,88267
18	Base Flow	31,192	18,62933	20,44	21,85867	17,28533	13,36533	6,029333	0	0	0	8,381333	27,58933
19	Direct Run Off	33	20	22	23	19	14	6	0	0	0	9	30
20	Run Off	65	39	42	45	36	28	12	0	0	0	17	57
21	Debit (x1000)	77534,4	46307,2	50808	54334,4	42966,4	33222,4	14987,2	0	0	0	20833,6	68579,2
22	Debit	0,028948	0,019142	0,01897	0,020962	0,016042	0,012817	0,005596	0	0	0	0,008038	0,025605
23	Jumlah Hari	31	28	31	30	31	30	31	31	30	31	30	31

Lampiran 5 Perhitungan Debit Andalan 2014

PERHITUNGAN DEBIT ANDALAN 2014													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	Curah Hujan (R)	321	314	246	192	78	21	37	6	0	0	53	229
2	Hari Hujan (n)	12	14	13	10	6	1	1	0	0	0	3	14
Evapotranspirasi Terbatas													
3	Evapotranspirasi	3,306235	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414	5,426003	4,889699	3,779384	3,606184
4	Lahan Terbuka	%	30	30	30	30	30	30	30	30	30	30	30
5	dE/Eto = (m/20)*(18-n)	0,085	0,065	0,075	0,115	0,18	0,255	0,25	0,265	0,27	0,27	0,22	0,065
6	dE	0,28103	0,208024	0,242879	0,333294	0,61018	0,871348	0,971587	1,323255	1,465021	1,320219	0,831464	0,234402
7	Etl = Eto-De	3,025205	2,992345	2,995505	2,564918	2,77971	2,545703	2,914762	3,67016	3,960982	3,56948	2,947919	3,371782
Water Balance													
8	S = R-Etl	mm	318	311	243	190	76	34	2	-4	-4	50	226
9	Run Off Storm	mm	32,1	31,4	24,56667	19,23333	7,833333	3,666667	0,6	0	0	5,3	22,93333
10	Soil Storage (IS)	mm	286	280	218	171	68	30	2	-4	-4	45	203
11	Soil Moisture = IS+SMC ; SMC=150	mmHg	436	430	368	321	218	180	152	146	146	195	353
12	Water Surplus	mm	32	31	25	19	8	4	1	0	0	5	23
Run Off and Water Storage													
13	Infiltrasi (I), I=0,4	mm	12,84	12,56	9,826667	7,693333	3,133333	1,466667	0,24	0	0	2,12	9,173333
14	0,5*I*(1+k), k=0,8	mm	5,136	5,024	3,930667	3,077333	1,253333	0,586667	0,096	0	0	0,848	3,669333
15	k*V(n-1)	mm	2,935467	4,1088	4,0192	3,144533	2,461867	0,273067	0,469333	0,0768	0	0	0,6784
16	Storage Volume (Vn)	mm	8,071467	9,1328	7,949867	6,221867	3,7152	1,344	0,859733	0,565333	0,0768	0,848	4,347733
17	dVn = (k*V(n-1))-Vn	mm	-5,136	-5,024	-3,930667	-3,07733	-1,25333	-0,58667	-0,096	0	0	-0,848	-3,66933
18	Base Flow	mm	17,976	17,584	13,75733	10,77067	4,386667	1,94667	0,336	0	0	2,968	12,84267
19	Direct Run Off	mm	19	19	15	12	5	2	0	0	0	3	14
20	Run Off	mm/bh	37	36	28	22	9	4	1	0	0	6	27
21	Debit (x1000)	m ³ /bh	44683,2	43708,8	34196,8	26772,8	10904	2969,6	5104	835,2	0	7377,6	31923,2
22	Debit	m ³ /dk	0,016683	0,018067	0,012768	0,010329	0,004071	0,001146	0,000312	0	0	0,002846	0,01919
23	Jumlah Hari		31	28	31	30	31	30	31	30	31	30	31

Lampiran 6 Perhitungan Debit Andalan 2015

PERHITUNGAN DEBIT ANDALAN 2015													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	Curah Hujan (R)	241	420	319	307	64	0	0	0	0	0	36	204
2	Hari Hujan (n)	12	17	17	12	2	0	0	0	0	0	2	11
Evapotranspirasi Terbatas													
3	Evapotranspirasi	3,3062246	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414309	5,42600301	4,8896992	3,77938376	3,60618408
4	Lahan Terbuka	30	30	30	30	30	30	30	30	30	30	30	30
5	$dE/E_0 = (n/20) * (18-n)$	0,09	0,01	0,01	0,095	0,24	0,27	0,27	0,27	0,27	0,27	0,235	0,11
6	dE	0,2975611	0,032004	0,032384	0,27533	0,813574	0,922604	1,049314	1,348221863	1,46502081	1,3202188	0,88815518	0,39668025
7	$E_d = E_0 \cdot dE$	3,0086735	3,168366	3,206	2,622883	2,576317	2,494447	2,837035	3,645192446	3,9609822	3,5694804	2,89122838	3,20950384
Water Balance													
8	$S = R - E_d$	238	417	315	305	61	-2	-3	-4	-4	-4	33	201
9	Run Off Storm	24,066667	42,033333	31,86667	30,733333	6,366667	0	0	0	0	0	3,56666667	20,4
10	Soil Storage (IS)	214	375	284	274	55	-2	-3	-4	-4	-4	29	180
11	Soil Moisture = $IS \cdot SMC = 150$	364	525	434	424	205	148	147	146	146	146	179	330
12	Water Surplus	24	42	32	31	6	0	0	0	0	0	4	20
Run Off and Water Storage													
13	Infiltrasi (I), $I=0,4$	9,6266667	16,81333	12,74667	12,293333	2,546667	0	0	0	0	0	1,42666667	8,16
14	$0,5 * I * (1+k)$, $k=0,8$	3,8506667	6,725333	5,098667	4,917333	1,018667	0	0	0	0	0	0,57066667	3,264
15	$k * V(n-1)$	2,6112	3,080533	5,380267	4,078933	3,933867	0,814933	0	0	0	0	0	0,45653333
16	Storage Volume (Vn)	6,4618667	9,808867	10,47893	8,996267	4,952533	0,814933	0	0	0	0	0,57066667	3,72053333
17	$dVn = (k * V(n-1)) - Vn$	-3,850667	-6,72533	-5,09867	-4,91733	-1,01867	0	0	0	0	0	-0,5706667	-3,264
18	Base Flow	13,477333	23,52867	17,84533	17,21067	3,565333	0	0	0	0	0	1,99733333	11,424
19	Direct Run Off	14	25	19	18	4	0	0	0	0	0	2	12
20	Run Off	28	49	37	36	7	0	0	0	0	0	4	24
21	Debit ($\times 1000$)	33500,8	58510,4	44358,4	42780,8	8862,4	0	0	0	0	0	4964,8	28396,8
22	Debit	0,0125078	0,024186	0,016562	0,016505	0,003309	0	0	0	0	0	0,00191543	0,01060215
23	Jumlah Hari	31	28	31	30	31	30	31	31	30	31	30	31

Lampiran 7 Perhitungan Debit Andalan 2016

PERHITUNGAN DEBIT ANDALAN 2016													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	Curah Hujan (R)	470	652	335	106	158	174	89	35	39	306	226	364
2	Hari Hujan (n)	19	19	15	6	7	8	5	2	1	9	10	15
Evapotranspirasi Terbatas													
3	Evapotranspirasi	3,306235	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414	5,426003	4,889699	3,779384	3,606184
4	Lahan Terbuka	30	30	30	30	30	30	30	30	30	30	30	30
5	$dE/Eto = (m/20) * (18-n)$	-0,01	-0,02	0,045	0,175	0,16	0,155	0,2	0,245	0,25	0,13	0,115	0,04
6	dE	-0,03306	-0,06401	0,145727	0,507187	0,529643	0,529643	0,77727	1,223387	1,356501	0,635661	0,434629	0,144247
7	$Etl = Eto - De$	3,339297	3,264377	3,092656	2,391026	2,847508	2,887408	3,109079	3,770028	4,069502	4,254038	3,344755	3,461937
Water Balance													
8	$S = R - Etl$	466	649	332	104	155	171	86	31	35	302	222	361
9	Run Off Storm	46,96667	65,2	33,5	10,6	15,83333	17,4	8,9	3,466667	3,933333	30,61667	22,56667	36,43333
10	Soil Storage (IS)	419	584	298	93	140	154	77	27	31	271	200	324
11	Soil Moisture = $IS + SMC$; $SMC = 150$	569	734	448	243	290	304	227	177	181	421	350	474
12	Water Surplus	47	65	34	11	16	17	9	3	4	31	23	36
Run Off and Water Storage													
13	Infiltrasi (I), $I=0,4$	18,78667	26,08	13,4	4,24	6,333333	6,96	3,56	1,386667	1,573333	12,24667	9,026667	14,57333
14	$0,5^{SI} * (1+k)$, $k=0,8$	7,514667	10,432	5,36	1,696	2,533333	2,784	1,424	0,554667	0,629333	4,898667	3,610667	5,829333
15	$k^{*V(n-1)}$	4,663467	6,011733	8,3456	4,288	1,3568	2,026667	2,2272	1,1392	0,443733	0,503467	3,918933	2,888533
16	Storage Volume (Vn)	12,17813	16,44373	13,7056	5,984	3,890133	4,810667	3,6512	1,693867	1,073067	5,402133	7,5296	8,717867
17	$dVn = (k^{*V(n-1)}) - Vn$	-7,51467	-10,432	-5,36	-1,696	-2,533333	-2,784	-1,424	-0,55467	-0,629333	-4,89867	-3,61067	-5,82933
18	Base Flow	26,30133	36,512	18,76	5,936	8,866667	9,744	4,984	1,941333	2,202667	17,14533	12,63733	20,40267
19	Direct Run Off	28	39	20	6	10	10	5	2	2	18	14	22
20	Run Off	54	76	39	12	18	20	10	4	5	36	26	42
21	Debit (x1000)	65377,6	90758,4	46632	14755,2	22040	24220,8	12388,8	4825,6	5475,2	42618,4	31412,8	50715,2
22	Debit	0,024409	0,036222	0,01741	0,005693	0,008229	0,009344	0,004625	0,001802	0,002112	0,015912	0,012119	0,018935
23	Jumlah Hari	31	29	31	30	31	30	31	31	30	31	30	31

Lampiran 8 Perhitungan Debit Andalan 2017

PERHITUNGAN DEBIT ANDALAN 2017														
Uraian	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December	
1	Curah Hujan (R)	mm	461	646	539	366	15	5	32	0	4	55	368	414
2	Hari Hujan (n)		22	18	18	16	1	0	2	0	1	2	16	16
Evapotranspirasi Terbatas														
3	Evapotranspirasi	mm	3,306235	3,200369	3,2,38384	2,898213	3,389891	3,417051	3,886349	4,993414	5,426003	4,889699	3,7793838	3,6061841
4	Lahan Terbuka	%	30	30	30	30	30	30	30	30	30	30	30	30
5	dE/Eto = (m/20)*(18-n)		-0,065	0	0,005	0,03	0,25	0,265	0,24	0,27	0,26	0,235	0,035	0,025
6	dE	mm	-0,21491	0	0,016192	0,086946	0,847473	0,905519	0,932724	1,348222	1,410761	1,149079	0,1322784	0,0901546
7	Eit = Eto-De	mm	3,52114	3,200369	3,222192	2,811267	2,542418	2,511533	2,953625	3,645192	4,015242	3,74062	3,6471053	3,5160295
Water Balance														
8	S = R-Eit	mm	457	643	535	363	12	2	29	-4	0	51	365	411
9	Run Off Storm	mm	46,06667	64,63333	53,86667	36,56667	1,5	0,466667	3,233333	0	0,4	5,466667	36,833333	41,433333
10	Soil Storage (IS)	mm	411	578	482	326	11	2	26	-4	0	45	328	369
11	Soil Moisture = IS+SMC; SMC=150	mmHg	561	728	632	476	161	152	176	146	150	195	478	519
12	Water Surplus	mm	46	65	54	37	2	0	3	0	0	5	37	41
Run Off and Water Storage														
13	Infiltrasi (I), I=0,4	mm	18,42667	25,85333	21,54667	14,62667	0,6	0,186667	1,293333	0	0,16	2,186667	14,733333	16,573333
14	0,5*I*(1+k), k=0,8	mm	7,370667	10,34133	8,618667	5,850667	0,24	0,074667	0,517333	0	0,064	0,874667	5,8933333	6,6293333
15	k*V(n-1)	mm	5,303467	5,896533	8,273067	6,894933	4,680533	0,192	0,059733	0,413867	0	0,0512	0,6997333	4,7146667
16	Storage Volume (Vn)	mm	12,67413	16,23787	16,89173	12,7456	4,920533	0,266667	0,577067	0,413867	0,064	0,925867	6,5930667	11,344
17	dVn = (k*V(n-1))-Vn	mm	-7,37067	-10,3413	-8,61867	-5,85067	-0,24	-0,07467	-0,51733	0	-0,064	-0,87467	-5,893333	-6,629333
18	Base Flow	mm	25,79733	36,19467	30,16533	20,47733	0,84	0,261333	1,810667	0	0,224	3,061333	20,626667	23,202667
19	Direct Run Off	mm	28	39	32	22	1	2	2	0	0	3	22	25
20	Run Off	mm/bln	53	75	62	42	2	1	4	0	0	6	43	48
21	Debit (x1000)	m3/bln	64124,8	89969,6	74982,4	50900,8	2088	649,6	4500,8	0	556,8	7609,6	51272	57675,2
22	Debit	m3/dk	0,023941	0,03719	0,027995	0,019638	0,00078	0,000251	0,00168	0	0,000215	0,002841	0,0197809	0,0215335
23	Jumlah Hari		31	28	31	30	31	30	31	31	30	31	30	31

Lampiran 9 Perhitungan Debit Andalan 2018

PERHITUNGAN DEBIT ANDALAN 2018													
Uraian	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
Curah Hujan (R)	mm	312	673	355	173	19	13	0	0	24	0	200	356
Hari Hujan (n)		14	24	14	7	1	1	0	0	1	0	8	11
Evapotranspirasi Terbatas													
Evapotranspirasi	mm	3,3062346	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414309	5,42600301	4,8896992	3,77938376	3,60618408
Lahan Terbuka	%	30	30	30	30	30	30	30	30	30	30	30	30
$dE/Eto = (m/20)^*(18-n)$		0,065	-0,085	0,055	0,165	0,26	0,255	0,27	0,27	0,255	0,27	0,15	0,1
dE	mm	0,2149053	-0,27203	0,178111	0,478205	0,881372	0,871348	1,049314	1,348221863	1,38363077	1,3202188	0,56690756	0,36061841
$Etl = Eto-De$	mm	3,0913294	3,472401	3,060273	2,420008	2,508519	2,545703	2,837035	3,645192446	4,04237225	3,5694804	3,21247619	3,24556568
Water Balance													
S = R-Etl	mm	309	669	352	171	16	10	-3	-4	20	-4	197	353
Run Off Storm	mm	31,2333333	67,26667	35,53333	17,3	1,9	1,26667	0	0	2,4	0	20	35,6333333
Soil Storage (IS)	mm	278	602	317	153	15	9	-3	-4	18	-4	177	317
Soil Moisture = IS+SMC ; SMC=150	mmHg	428	752	467	303	165	159	147	146	168	146	327	467
Water Surplus	mm	31	67	36	17	2	1	0	0	2	0	20	36
Run Off and Water Storage													
Infiltrasi (I), I=0.4	mm	12,4933333	26,90667	14,21333	6,92	0,76	0,506667	0	0	0,96	0	8	14,2533333
$0,5*V*(1+k)$, k=0,8	mm	4,9973333	10,76267	5,685333	2,768	0,304	0,202667	0	0	0,384	0	3,2	5,7013333
$k*V(n-1)$	mm	4,5610667	3,997867	8,610133	4,548267	2,2144	0,2432	0,162133	0	0	0,3072	0	2,56
Storage Volume (Vh)	mm	9,5584	14,76053	14,29547	7,316267	2,5184	0,445867	0,162133	0	0,384	0,3072	3,2	8,2613333
$dVn = (k*V(n-1))-Vn$	mm	-4,997333	-10,7627	-5,68533	-2,768	-0,304	-0,20267	0	0	-0,284	0	-3,2	-5,7013333
Base Flow	mm	17,490667	37,66933	19,89867	9,688	1,064	0,709333	0	0	1,344	0	11,2	19,9546667
Direct Run Off	mm	19	40	21	10	1	1	0	0	1	0	12	21
Run Off	mm/bn	36	78	41	20	2	1	0	0	3	0	23	41
Debit (x1000)	m ³ /bn	43476,8	93635,2	49462,4	24081,6	2644,8	1763,2	0	0	3340,8	0	27840	49601,6
Debit	m ³ /dk	0,0162324	0,038705	0,018467	0,009291	0,000987	0,00068	0	0	0,00128889	0	0,01074074	0,01851912
Jumlah Hari		31	28	31	30	31	30	31	31	30	31	30	31

Lampiran 10 Perhitungan Debit Andalan 2019

PERHITUNGAN DEBIT ANDALAN 2019													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	Curah Hujan (R)	516	371	318	246	2	0	14	0	0	0	45	344
2	Hari Hujan (n)	20	15	15	11	1	0	0	0	0	0	3	10
Evapotranspirasi Terbatas													
3	Evapotranspirasi	3.306235	3.200369	3.238384	2.898213	3.389891	3.417051	3.886349	4.993414	5.426003	4.889699	3.77938376	3.6061841
4	Lahan Terbuka	30	30	30	30	30	30	30	30	30	30	30	30
5	dE/Eto = (m/20) ^{0.18-n}	-0.03	0.04	0.045	0.105	0.26	0.27	0.265	0.27	0.27	0.27	0.225	0.115
6	dE	-0.09919	0.128015	0.145721	0.304312	0.881372	0.922604	1.029882	1.348222	1.465021	1.320219	0.85036135	0.4147112
7	Eti = Eto-De	3.405422	3.072354	3.092656	2.593901	2.508519	2.494447	2.856466	3.645192	3.960982	3.56948	2.92902241	3.1914729
Water Balance													
8	S = R-Eti	513	368	315	243	-1	-2	11	-4	-4	-4	42	340
9	Run Off Storm	516	371.333333	318.333333	246.666667	0.2	0	1.366667	0	0	0	4.5333333333	34.366667
10	Soil Storage (S)	461	331	283	219	-1	-2	9	-4	-4	-4	38	306
11	Soil Moisture = IS+SMC; SMC=150	611	481	433	369	149	148	159	146	146	146	188	456
12	Water Surplus	52	37	32	25	0	0	1	0	0	0	5	34
Run Off and Water Storage													
13	Infiltrasi (I), I=0.4	20.64	14.853333	12.733333	9.826667	0.08	0	0.546667	0	0	0	1.8133333333	13.746667
14	0.5*I*(1+k), k=0.8	8.256	5.941333	5.093333	3.930667	0.032	0	0.218667	0	0	0	0.7253333333	5.4986667
15	k*V(n-1)	4.398933	6.6048	4.753067	4.074667	3.144533	0.0256	0	0.174933	0	0	0	0.5802667
16	Storage Volume (Vn)	12.65493	12.54613	9.8464	8.005333	3.176533	0.0256	0.218667	0.174933	0	0	0.7253333333	6.0789333
17	dVn = (k*V(n-1))-Vn	-8.256	-5.94133	-5.09333	-3.93067	-0.032	0	-0.21867	0	0	0	-0.72533333	-5.498667
18	Base Flow	28.896	20.79467	17.82667	13.75733	0.112	0	0.765333	0	0	0	2.53866667	19.245333
19	Direct Run Off	31	22	19	15	0	0	1	0	0	0	3	21
20	Run Off	60	43	37	28	0	0	2	0	0	0	5	40
21	Debit (x1000)	71827.2	51689.6	44312	34196.8	278.4	0	1902.4	0	0	0	6310.4	47838.4
22	Debit	0.026817	0.021366	0.016544	0.013193	0.000104	0	0.00071	0	0	0	0.00243457	0.0178608
23	Jumlah Hari	31	28	31	30	31	30	31	31	30	31	30	31

Lampiran 11 Perhitungan Debit Andalan 2020

PERHITUNGAN DEBIT ANDALAN 2020													
Uraian	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
Curah Hujan (R)	mm	529	614	167	381	52	3	7	0	0	73	128	262
Hari Hujan (n)		18	22	11	15	3	1	1	0	0	3	4	12
Evapotranspirasi Terbatas													
Evapotranspirasi	mm	3.306235	3.203369	3.238384	2.898213	3.389891	3.417051	3.886349	4.993414	5.426003	4.889699	3.7793838	3.6061841
Lahan Terbuka	%	30	30	30	30	30	30	30	30	30	30	30	30
dE/Eto = (m/20)*(18-n)		0.005	-0.055	0.11	0.04	0.22	0.26	0.26	0.27	0.27	0.22	0.205	0.085
dE	mm	0.016531	-0.17602	0.356222	0.115929	0.745776	0.888433	1.010451	1.348222	1.465021	1.075734	0.7747737	0.3065256
Etl = Eto-De	mm	3.289703	3.37639	2.882161	2.782284	2.644115	2.528618	2.875898	3.645192	3.960982	3.813965	3.0046101	3.2996584
Water Balance													
S = R-Etl	mm	526	610	164	378	50	1	4	-4	-4	69	125	258
Run Off Storm	mm	52.88333	61.36667	16.73333	38.1	5.233333	0.333333	0.7	0	0	7.266667	12.8	26.166667
Soil Storage (S)	mm	473	549	148	340	44	0	3	-4	-4	62	112	232
Soil Moisture = IS+SMC : SMC=150	mmHg	623	699	298	490	194	150	153	146	146	212	262	382
Water Surplus	mm	53	61	17	38	5	0	1	0	0	7	13	26
Run Off and Water Storage													
Infiltrasi (D), I=0.4	mm	21.15333	24.54667	6.693333	15.24	2.093333	0.133333	0.28	0	0	2.906667	5.12	10.466667
$0.5^k \cdot I^*(1+k)$, k=0.8	mm	8.461333	9.818667	2.677333	6.096	0.837333	0.063333	0.112	0	0	1.162667	2.048	4.1866667
$k^*V(n-1)$	mm	3.349333	6.769067	7.854933	2.141867	4.8768	0.669867	0.042667	0.0896	0	0	0.9301333	1.6384
Storage Volume (Vn)	mm	11.81067	16.58773	10.53227	8.237867	5.714133	0.7232	0.154667	0.0896	0	1.162667	2.9781333	5.8250667
$dVn = (k^*V(n-1)) - Vn$	mm	-8.46133	-9.81867	-2.67733	-6.096	-0.83733	-0.05333	-0.112	0	0	-1.16267	-2.048	-4.1866667
Base Flow	mm	29.61467	34.36533	9.370667	21.336	2.930667	0.186667	0.392	0	0	4.069333	7.168	14.653333
Direct Run Off	mm	32	37	10	23	3	0	0	0	0	4	8	16
Run Off	mm/bln	61	71	19	44	6	0	1	0	0	8	15	30
Debit (x1000)	m ³ /bln	736133.6	85422.4	23928.8	53035.2	7284.8	464	974.4	0	0	10115.2	17817.6	36424
Debit	m ³ /dk	0.027484	0.034093	0.008697	0.020461	0.00272	0.000179	0.000364	0	0	0.003777	0.0068741	0.0135992
Jumlah Hari		31	29	31	30	31	30	31	31	30	31	30	31

Lampiran 12 Perhitungan Debit Andalan 2021

PERHITUNGAN DEBIT ANDALAN 2021													
Urutan	Unit	Januari	Februari	Maret	April	May	June	July	August	September	October	November	December
1	Curah Hujan (R)	413	358	112	121	23	159	0	1	68	112	124	287
2	Hari Hujan (n)	15	19	14	7	1	8	0	0	3	3	10	14
Evapotranspirasi Terbatas													
3	Evapotranspirasi	3,3062346	3,200369	3,238384	2,898213	3,389891	3,417051	3,886349	4,993414309	5,42600301	4,8896992	3,77938376	3,60618408
4	Lahan Terbuka		30	30	30	30	30	30	30	30	30	30	30
5	dE/Eto = (m/20)*(18-n)	0,04	-0,015	0,06	0,165	0,26	0,155	0,27	0,265	0,225	0,225	0,12	0,055
6	dE	0,1322494	-0,04801	0,194303	0,478205	0,881372	0,529643	1,049314	1,323254792	1,22085068	1,1001823	0,45352605	0,19834012
7	Etl = Eto-De	3,1739853	3,248375	3,044081	2,420008	2,508519	2,887408	2,837035	3,670159517	4,20515234	3,7895168	3,32585771	3,40784396
Water Balance													
8	S = R-Etl	410	354	109	119	20	156	-3	-2	64	109	121	284
9	Run Off Storm	41,333333	35,76667	11,23333	12,13333	2,3	15,86667	0	0,1333333333	6,8	11,233333	12,4	28,7
10	Soil Storage (IS)	369	319	98	107	18	140	-3	-2	57	97	108	255
11	Soil Moisture = IS+SMC ; SMC=150	519	469	248	257	168	290	147	148	207	247	258	405
12	Water Surplus	41	36	11	12	2	16	0	0	7	11	12	29
Run Off and Water Storage													
13	Infiltrasi (I), I=0,4	16,533333	14,30667	4,493333	4,853333	0,92	6,346667	0	0,0533333333	2,72	4,4933333	4,96	11,48
14	0,5*H*(1+k), k=0,8	6,6133333	5,722667	1,797333	1,941333	0,368	2,538667	0	0,0213333333	1,088	1,7973333	1,984	4,592
15	k*V(n-1)	3,6736	5,290667	4,578133	1,437867	1,553067	0,2944	2,030933	0	0,01706667	0,8704	1,43786667	1,5872
16	Storage Volume (Vn)	10,286933	11,01333	6,375467	3,3792	1,921067	2,833067	2,030933	0,0213333333	1,10506667	2,6677333	3,42186667	6,1792
17	dVn = (k*V(n-1))-Vn	-6,613333	-5,72267	-1,79733	-1,94133	-0,368	-2,53867	0	-0,0213333333	-1,088	-1,797333	-1,984	-4,592
18	Base Flow	23,146667	20,02933	6,290667	6,794667	1,288	8,885333	0	0,0746666667	3,808	6,2906667	6,944	16,072
19	Direct Run Off	25	21	7	7	1	10	0	0	4	7	7	17
20	Run Off	48	41	13	14	3	18	0	0	8	13	14	33
21	Debit (x1000)	57536	49787,2	15636,8	16889,6	3201,6	22086,4	0	185,6	9465,6	15636,8	17260,8	39950,4
22	Debit	0,0214815	0,02058	0,005838	0,006516	0,0001195	0,0008521	0	6,92951E-05	0,00365185	0,00665926	0,01491577	
23	Jumlah Hari	31	28	31	30	31	30	31	31	30	31	30	31

Lampiran 13 Analisis Kebutuhan Air Tanaman X1

No	Uraian	Oktober		November		Desember		Januari		Februari		Maret		April		Mei		Juni		Juli		Agustus		September	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
1	Pola Tanaman																								
2	Korl Tanaman (K)																								
	k1	LP	LP	0,8	0,93	1,2	1,4	1,35	0,93	1,12															
	k2	LP	LP	0,8	0,93	1,2	1,4	1,35	0,93	1,12															
3	Korl Benda Tanaman	0	0	0,4	0,865	1,125	1,36	1,375	1,14	1,025	0,66	0,25	0,545	0,76	0,99	1,035	0,51	0	0,25	0,545	0,76	0,99	1,035	0,51	0
4	Evapotranspirasi Prosesal (Eo)	4,89	4,89	3,78	3,78	3,61	3,61	3,31	3,31	3,2	3,2	3,24	3,24	2,9	2,9	3,39	3,39	3,42	3,42	3,89	3,89	4,99	4,99	5,43	5,43
5	Kebutuhan Air Bagi Tanaman (ET)	0,000	0,000	1,512	3,270	4,061	4,910	4,5125	3,773	3,280	1,792	0,810	1,766	2,204	2,871	3,509	1,729	0,000	0,855	2,120	2,986	4,940	5,165	2,769	0,000
	M	10,758	10,758	8,316	8,316	7,942	7,942	7,282	7,282	7,040	7,128	7,128	6,380	6,380	7,458	7,458	7,524	7,524	8,538	8,538	10,978	10,978	11,946	11,946	11,946
	S	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290	290
6	Keb. Air untuk penyiraman lahan (P0)																								
7	Rasio Penyiraman Lahan	0,333	0,333	0,333	0,333																				
8	Keb. Air untuk penyiraman lahan (P1)	4,946	4,946	3,571	3,571																				
9	Petrolisi (P)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	ENGANTIAN LAPISAN GEANGAN/WL																								
11	WL1					3,333																			
12	WL2					3,333																			
13	WL3					3,333																			
14	Renta WLR					1,111																			
15	Rasio Luas Tanaman	0,667	0,667	0,667	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
16	Keb. Air untuk (Eo + P + WLR)	1,533	1,333	2,941	3,513	7,172	8,021	8,773	6,885	6,391	3,792	2,810	3,766	4,204	4,871	5,509	3,729	2,000	2,855	4,120	4,986	6,940	7,165	4,769	2,000
17	R efektif padi dan palawija			1,09	1,09	5,5	5,5	7,28	7,28	7,41	7,41	5,31	5,31	3,65	3,65	0,97	0,97	0,28	0,28	0,170	0,170	0,000	0,000	0,000	0,000
18	Keb. Air Irigasi (NR)	0,727	0,639	0,810	0,946	1,466	1,564	1,87387	1,639	1,597	1,296	0,939	1,080	0,909	0,986	0,750	0,544	0,231	0,363	0,496	0,593	0,803	0,829	0,552	0,231
19	Efisiensi Irigasi	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364
20	Keb. Air Irigasi di finale (DR)	1,996	1,736	2,226	2,598	4,028	4,298	5,02711	4,502	4,387	3,561	2,581	2,885	2,496	2,708	2,619	1,494	0,656	0,996	1,364	1,629	2,206	2,277	1,516	0,656

Lampiran 15 Analisis Kebutuhan Air Tanaman X3

No	Uraian	Satuan	November		Desember		Januari		Februari		Maret		April		Mei		Juni		Juli		Agustus		September		October					
			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2				
1	Pola Tanam		LP PADI PALAWUJA JAGUNG PALAWUJA JAGUNG																											
2	Ket. Tanaman (K)																													
	kl	LP	0,8	0,95	1,32	1,4	1,35	0,93	1,12					0,5	0,59	0,93	1,05	1,02			0,5	0,59	0,93	1,05	1,02					
	k2	LP					1,35	0,93	1,12									1,02												
3	Kof. Rerata Tanaman		0	0,4	0,865	1,125	1,36	1,35	1,14	1,025	0,66	0,25	0,545	0,76	0,99	1,035	0,51	0	0,25	0,545	0,76	0,99	1,035	0,51	0					
4	Esipatansprasi Prensai (Eto)	mm/hr	3,78	3,78	3,61	3,31	3,31	3,2	3,24	3,24	2,9	2,9	3,39	3,39	3,42	3,42	3,89	3,89	3,89	3,89	4,99	4,99	5,43	5,43	4,89	4,89				
5	Kebutuhan Air Bagi Tanaman (ET)	mm/hr	0,000	0,000	1,444	3,1265	3,724	4,502	4,4	3,648	3,321	1,814	0,725	1,581	2,576	3,356	3,540	1,744	0,000	0,973	2,720	3,792	5,376	5,620	2,984	0,000				
	M		8,316	8,316	7,942	7,942	7,282	7,04	7,040	7,128	7,128	6,380	6,380	7,458	7,458	7,524	7,524	8,558	8,558	8,558	10,978	10,978	11,946	11,946	10,758	10,758				
	S		250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250			
6	Keb. Air untuk penyiraman lahan (P)	mm/hr	13,172	10,714	10,442	10,44195																								
7	Rasio Penyiraman Lahan		0,333	0,333	0,333	0,3333333																								
8	Keb. Air untuk penyiraman lahan dgn rasio	mm/hr	4,391	3,571	3,481	3,480651																								
9	Perkolasi (P)	mm/hr	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
10	ENGGANTIAN LAPISAN GELANGAN W/L	mm/hr																												
11	W/L1						3,333																							
12	W/L2							3,333333																						
13	W/L3								3,333																					
14	Rerata W/L						1,111111	2,222	1,111	1,111																				
15	Rasio Lusin Tanaman		0,667	0,667	0,666667	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
16	Keb. Air untuk (E _k + P + W/L)		1,333	1,333	2,296	3,4151	6,835	7,613	8,622	6,759	6,432	3,814	2,725	3,381	4,576	5,356	5,540	3,744	2,000	2,973	4,720	5,792	7,576	7,620	4,494	2,000				
17	R efektif pada dan palawija	mm/hr			1,09	1,09	5,5	5,5	7,28	7,280	7,41	7,41	5,31	5,31	3,65	3,65	1,97	1,97	0,28	0,28	0,170	0,170	0,000	0,000	0,000					
18	Keb. Air Irigasi (NIR)	mm/dtha	0,662	0,794	0,929951	1,427	1,517	1,839887	1,624	1,602	1,299	0,930	0,930	1,029	0,952	1,042	0,753	0,545	0,231	0,376	0,566	0,690	0,853	0,882	0,520	0,231				
19	Efisiensi Irigasi		0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	0,364	
20	Keb. Air Irigasi di intake (DIR)	mm/dtha	1,819	1,559	2,183	2,538328	3,921	4,168	5,054635	4,462	4,400	3,568	2,554	2,826	2,615	2,863	2,069	1,498	0,626	1,034	1,554	1,895	2,244	2,422	1,428	0,626				

Lampiran 17 Analisa Hasil Usaha Tani Padi

Analisa Hasil Usaha Tani Padi / Ha					
No	Uraian	Kebutuhan		Harga	Total
		Jumlah	Satuan	(Rp)	(Rp)
A	Modal				
1	Bibit	25	Kg	55000	1375000
2	Pupuk Kandang	1000	Kg	1000	1000000
3	Pupuk Urea	150	Kg	2250	337500
4	Pupuk TSP/SP 36	100	Kg	2400	240000
5	Pupuk NPK Ponska	300	Kg	2300	690000
6	Petroganik	1000	Kg	800	800000
7	Pestisida / Insektisida	5	lt	75000	375000
	Jumlah Modal (A)				4817500
B	Biaya Operasional / Upah Kerja				
1	Pengolahan lahan	30	HOKp	40000	1200000
2	Pencabutan Bibit + Penanaman	20	HOKw	55000	1100000
3	Penyiangan + Pemupukan ke-1	16	HOKp	60000	960000
4	Penyiangan + Pemupukan ke-2	16	HOKp	60000	960000
5	Penyemprotan	4	HOKp	60000	240000
6	Panen dan Pasca Panen	12	HOKp	60000	720000
7	Biaya Pengeringan	8	HOKp	60000	480000
	Jumlah Biaya Operasional				5660000
Total Pengeluaran A + B					10477500

Lampiran 18 Analisa Hasil Usaha Tani Jagung

Analisa Hasil Usaha Tani Jagung / Ha					
No	Uraian	Kebutuhan		Harga	Total
		Jumlah	Satuan	(Rp)	(Rp)
A	Modal				
1	Bibit	15	Kg	90000	1350000
2	Pupuk Kandang	1000	Kg	1000	1000000
3	Pupuk Urea	300	Kg	2250	675000
4	Pupuk TSP/SP 36	50	Kg	2400	120000
5	Pupuk NPK Ponska	200	Kg	2300	460000
6	Petroganik	1000	Kg	800	800000
7	Pestisida / Insektisida	5	lt	75000	375000
	Jumlah Modal (A)				4780000
B	Biaya Operasional / Upah Kerja				
1	Pengolahan lahan/traktor	1	ls	1750000	1750000
2	Pencabutan Bibit + Penanaman	20	HOKw	55000	1100000
3	Penyiangan + Pemupukan ke-1	16	HOKp	60000	960000
4	Penyiangan + Pemupukan ke-2	16	HOKp	60000	960000
5	Penyemprotan	4	HOKp	60000	240000
6	Panen dan Pasca Panen	12	HOKp	60000	720000
7	Biaya Pemipilan dengan treaser	1	ls	1500000	1500000
	Jumlah Biaya Operasional				7230000
	Total Pengeluaran A + B				12010000

Lampiran 19 Hasil Produksi Pertanian Mojokerto

Data Hasil Produksi Padi		Kabupaten Mojokerto		Kabupaten Mojokerto	
1	Luas Panen	54504	ha	1	ha
2	Produksi	312700	ton	5,7371936	ton
3	Harga	4700	Kg	4700000	ton
4	Hasil Produksi / Ha	5,7371936	ton	26964809,9	Rp/Ha
Data Hasil Produksi Jagung		Kabupaten Mojokerto			
1	Luas Panen	23608,6	ha	1	ha
2	Produksi	151967	ton	6,436934	ton
3	Harga	4000	Kg	4000000	ton
4	Hasil Produksi / Ha	6,436934	ton	25747736	Rp/Ha

Lampiran 20 Hasil Model Optimasi dengan Software PTT 1

POM for Windows

File Edit View Module Format Tools Window Help

Objective
 Maximize
 Minimize

Instruction
 There are more results available in additional windows. These may be opened by using the WINDOW option in the Main Menu.

Linear Programming Results

Optimasi PTT 1 Solution

	Xp1	Xj1	Xj2		RHS	Dual
Maximize	16487310	13737740	13737740			
Constraint 1	.0056	.0029	.0024	<=	.086	859241900
Constraint 2	1	1	1	<=	25.15	11675560
Solution->	8.0125	0	17.1375		367535000	

Ranging Solution list Iterations Dual

Linear Programming Solution Screen Heizer/Render's Operations Management

Module Print Screen Previous file Next file Save as Excel file Save as HTML

Lampiran 21 Hasil Model Optimasi dengan Software PTT 2

The screenshot displays the 'Linear Programming Results' window in POM for Windows. The window title is 'Optimasi PTT 2 Solution'. It contains a table with the following data:

	Xp1	Xj1	Xj2		RHS	Dual
Maximize	16487310	13737740	13737740			
Constraint 1	.0052	.0034	.0024	<=	.086	981990700
Constraint 2	1	1	1	<=	25.15	11380960
Solution->	9.1571	0	15.9929		370682300	

Below the table, there are tabs for 'Ranging', 'Solution list', 'Iterations', and 'Dual'. At the bottom of the window, there are buttons for 'Module', 'Print Screen', 'Previous file', 'Next file', 'Save as Excel file', and 'Save as HTML'. The status bar at the bottom right indicates 'Heizer/Render's Operations Management'.

Lampiran 22 Hasil Model Optimasi dengan Software PTT 3

The screenshot displays the POM for Windows interface. The main window shows the 'Linear Programming Results' for 'Optimasi PTT 3 Solution'. The results are presented in a table with columns for decision variables (Xp1, Xj1, Xj2), RHS, and Dual values. The objective is to maximize the value, and the constraints are listed as Constraint 1 and Constraint 2. The solution values are Xp1 = 12.268, Xj1 = 0, and Xj2 = 12.882, with a total objective value of 379235800.

	Xp1	Xj1	Xj2		RHS	Dual
Maximize	16487310	13737740	13737740			
Constraint 1	.0047	.0041	.0022	<=	.086	1099830000
Constraint 2	1	1	1	<=	25.15	11318110
Solution->	12.268	0	12.882		379235800	

At the bottom of the window, there are several tabs: 'Ranging', 'Solution list', 'Iterations', and 'Dual'. Below these tabs, there are buttons for 'Module', 'Print Screen', 'Previous file', 'Next file', 'Save as Excel file', and 'Save as HTML'. The text 'Heizer/Render's Operations Management' is visible in the bottom right corner.

Lampiran 23 Hasil Model Optimasi dengan Software PTT 4

The screenshot displays the 'Linear Programming Results' window in POM for Windows. The window title is 'Optimasi PTT 4 Solution'. It shows a table with columns for variables (Xp1, Xj1, Xj2), RHS, and Dual values. The objective is to maximize the value, and the constraints are listed as Constraint 1 and Constraint 2. The solution values are Xp1 = 17.5969, Xj1 = 0, and Xj2 = 7.5531.

	Xp1	Xj1	Xj2		RHS	Dual
Maximize	16487310	13737740	13737740			
Constraint 1	.0039	.0046	.0023	<=	.086	1718484000
Constraint 2	1	1	1	<=	25.15	9785223
Solution->	17.5969	0	7.5531		393888000	

Below the table, there are buttons for 'Ranging', 'Solution list', 'Iterations', and 'Dual'. At the bottom, there are buttons for 'Module', 'Print Screen', 'Previous file', 'Next file', 'Save as Excel file', and 'Save as HTML'. The status bar shows 'Linear Programming', 'Solution Screen', and 'Heizer/Render's Operations Management'.

Lampiran 24 Dokumentasi Komoditi Padi Dan Jagung Di Lapangan



Gambar 1. Penyiapan Lahan Padi



Gambar 2. Peralihan musim tanam jagung ke padi



Gambar 3. Peralihan musim tanam jagung ke padi



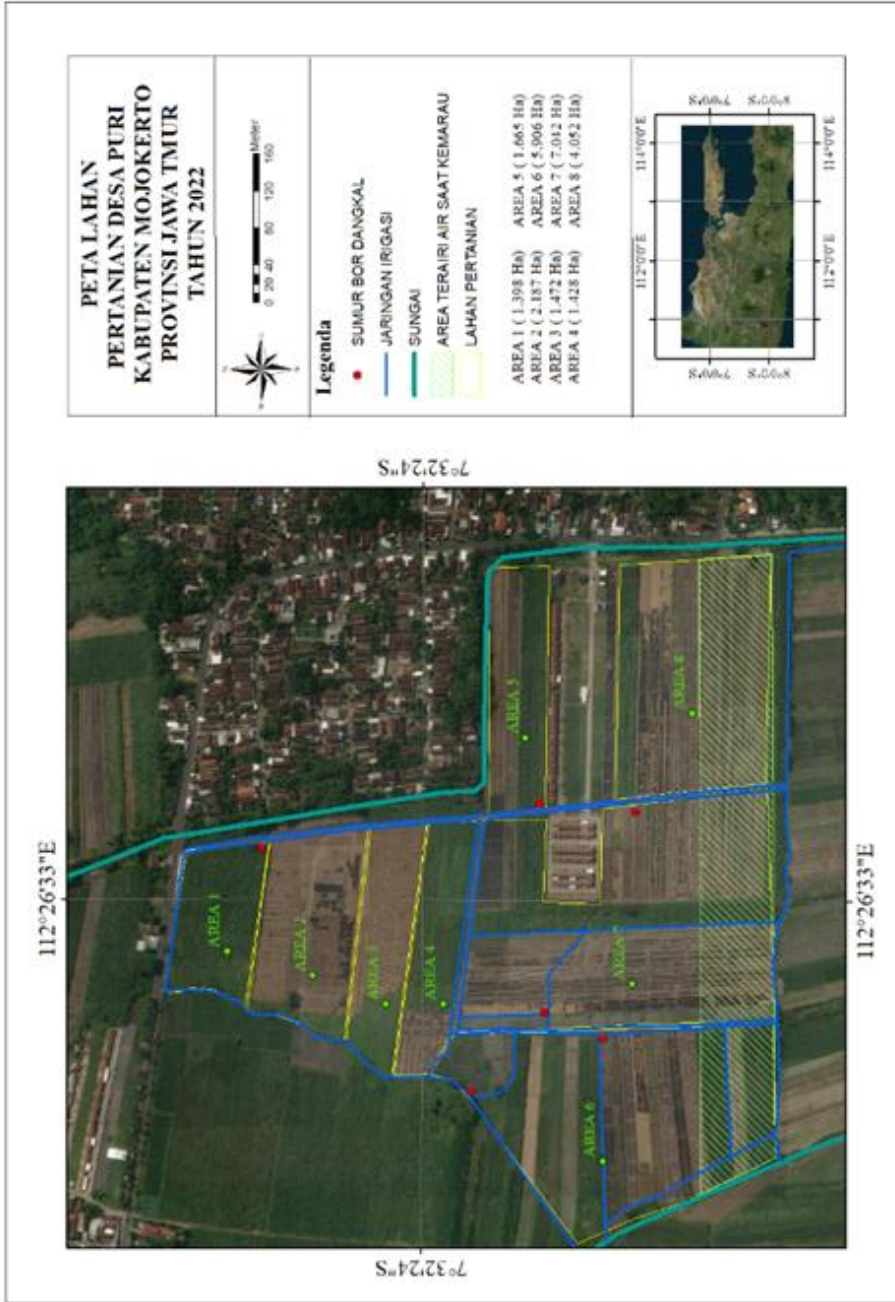
Gambar 4. Peralihan musim tanam jagung ke padi

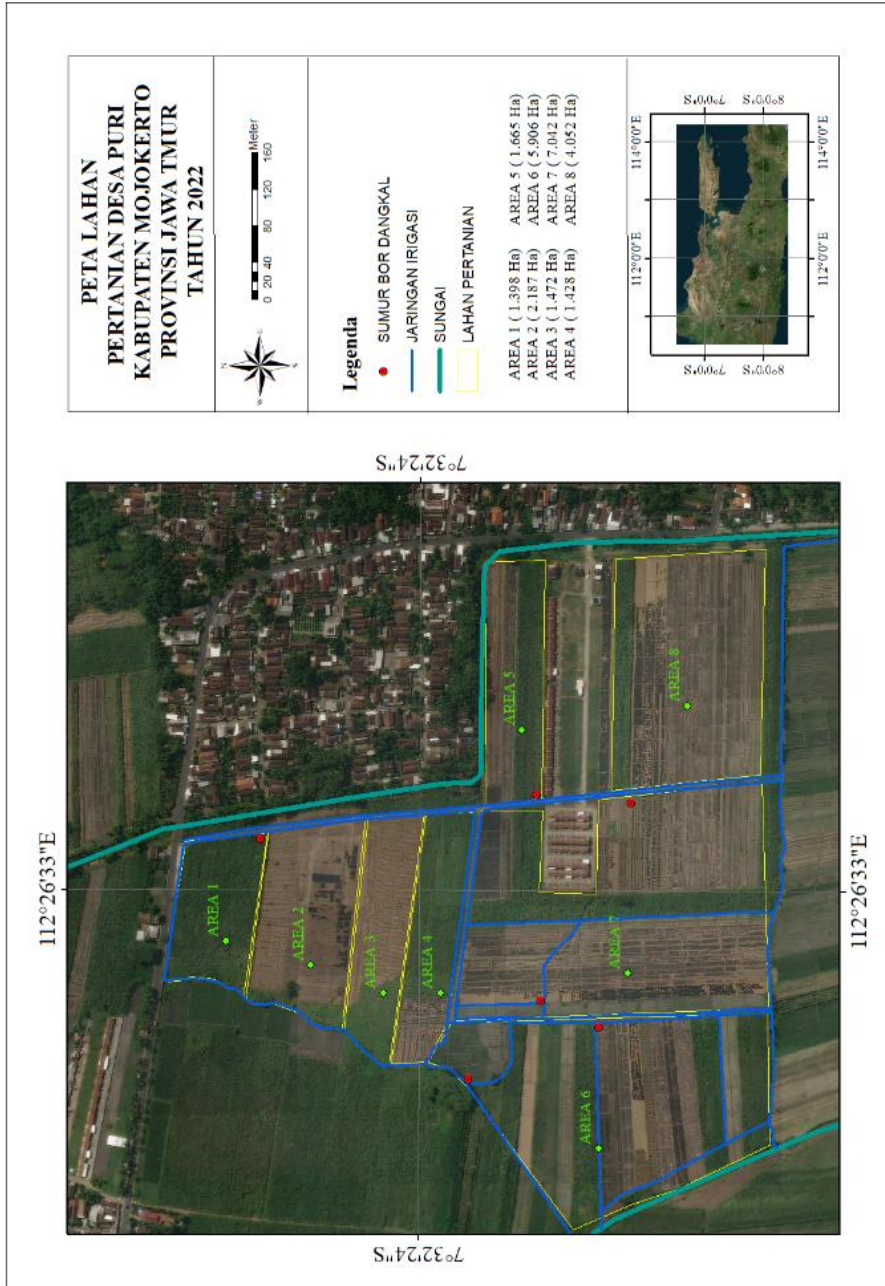


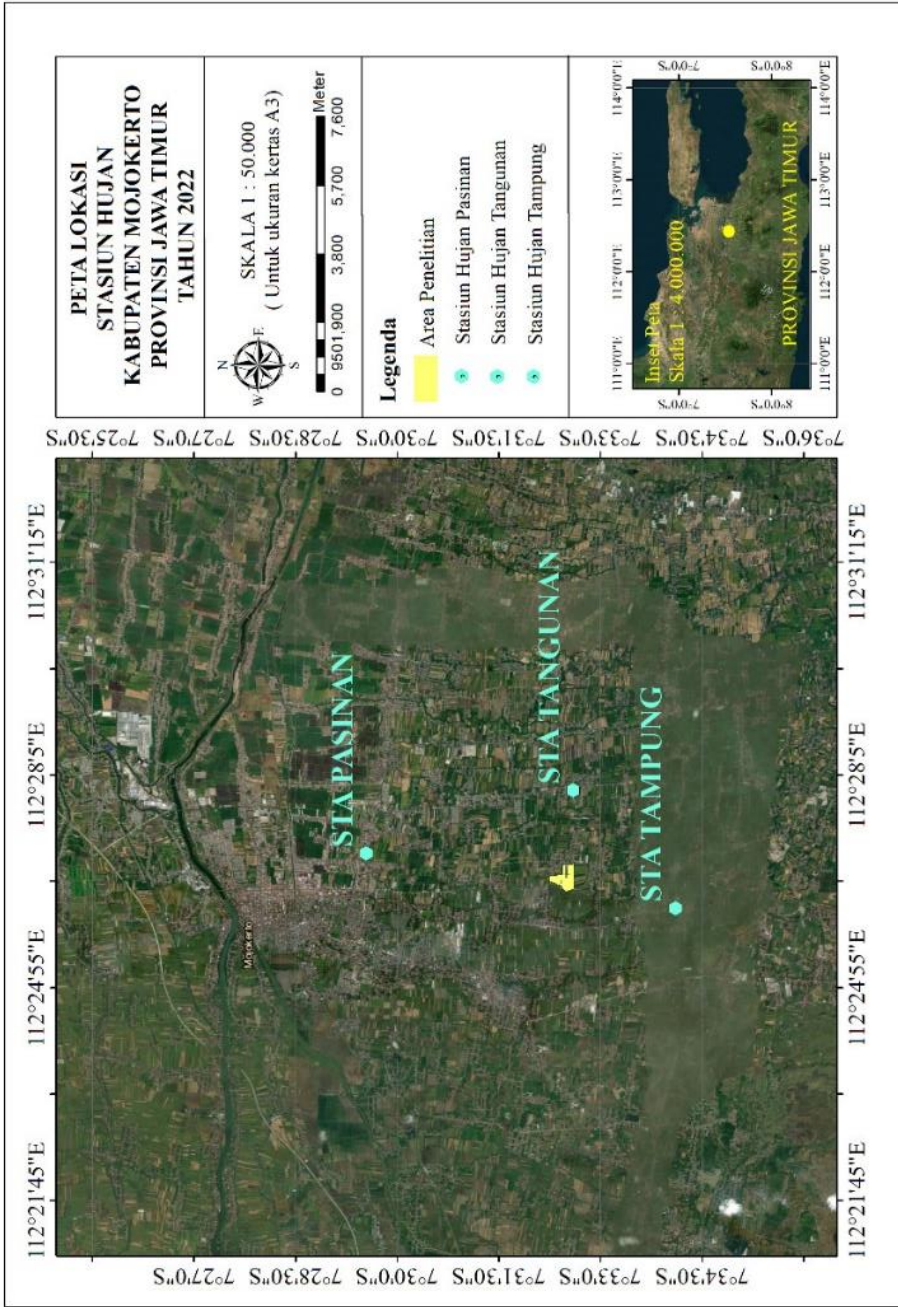
Gambar 5. Musim Tanam Jagung



Gambar 6. Musim Tanam Jagung







7°34'30"S 7°33'0"S 7°31'30"S 7°30'0"S 7°28'30"S 7°27'0"S

112°21'45"E 112°24'55"E 112°28'5"E 112°31'15"E

112°21'45"E 112°24'55"E 112°28'5"E 112°31'15"E