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LAMPIRAN

Lampiran 1. Data Primer Efisiensi Operasional

Data Primer Pemakaian Solar terhadap Budget

	Juni 2026									
Manual	**2**	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
Budget Solar (Liter)	546	546	546	546	546	546	546	546	546	546
Aktual Solar (Liter)	852	676	638	824	869	681	645	801	736	783
Solar thd Budget (%)	**156**	**124**	**117**	**151**	**159**	**125**	**118**	**147**	**135**	**143**
Otomatis										
Budget Solar (Liter)	629	629	629	629	629	629	629	629	629	629
Aktual Solar (Liter)	791	755	651	780	750	622	602	677	740	800
Solar thd Budget (%)	**126**	**120**	**104**	**124**	**119**	**99**	**96**	**108**	**118**	**127**

Data Primer Pemakaian Air terhadap Budget

	Juni 2026									
Manual	**2**	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
Budget Air (m3/ton tbs)	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
Aktual Air (m3/ton tbs)	1.80	1.41	1.37	1.57	1.59	1.49	1.68	1.47	1.42	1.40
Air thd Budget (%)	**125**	**98**	**95**	**109**	**111**	**104**	**116**	**102**	**98**	**97**
Otomatis										
Budget Air (m3/ton tbs)	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Aktual Air (m3/ton tbs)	0.96	1.02	1.07	1.16	1.32	1.05	1.14	1.10	1.20	0.81
Air thd Budget (%)	**68**	**73**	**76**	**83**	**94**	**75**	**81**	**79**	**86**	**58**

Data Primer Biaya Olah

	Juni 2026									
Manual	**2**	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
TBS Olah (Ton)	918	1,307	1,359	1,192	1,138	1,216	1,075	1,231	1,171	1,251
Total Biaya (Rp. 000)	20,256	25,652	34,524	21,124	27,125	23,145	19,496	21,038	23,185	24,699
Biaya Olah (Rp/Kg TBS)	**22**	**20**	**25**	**18**	**24**	**19**	**18**	**17**	**20**	**20**
Otomatis										
TBS Olah (Ton)	874	964	793	702	610	723	730	853	657	913
Total Biaya (Rp. 000)	12,218	14,359	15,359	9,637	11,505	14,182	12,499	13,014	8,387	11,839
Biaya Olah (Rp/Kg TBS)	**14**	**15**	**19**	**14**	**19**	**20**	**17**	**15**	**13**	**13**

Lampiran 2. Data Sekunder Efisiensi Operasional

Data Sekunder Kapasitas Olah thd Budget

	2025											
Manual	**Jan**	**Feb**	**Mar**	**April**	**Mei**	**Jun**	**Jul**	**Agust**	**Sept**	**Okt**	**Nov**	**Des**
Budget Solar (Liter)	21,169	21,169	21,169	21,169	21,169	21,169	21,169	21,169	21,169	21,169	21,169	21,271
Aktual Solar (Liter)	44,706	37,913	28,070	38,295	66,683	48,535	44,431	47,380	35,852	23,257	20,429	19,820
Solar thd Budget (%)	**211**	**179**	**133**	**181**	**315**	**229**	**210**	**224**	**169**	**110**	**97**	**93**
Otomatis												
Budget Solar (Liter)	29,216	19,860	21,621	20,570	22,161	22,994	24,122	25,741	25,798	28,469	26,622	25,145
Aktual Solar (Liter)	19,971	14,311	21,629	29,009	22,378	18,635	28,584	24,452	15,197	9,579	20,589	25,102
Solar thd Budget (%)	**68**	**72**	**100**	**141**	**101**	**81**	**118**	**95**	**59**	**34**	**77**	**100**

Data Sekunder Pemakaian Air terhadap Budget

	2025											
Manual	**Jan**	**Feb**	**Mar**	**April**	**Mei**	**Jun**	**Jul**	**Agust**	**Sept**	**Okt**	**Nov**	**Des**
Budget Air (m3/ton tbs)	1.52	1.70	1.52	1.61	1.48	1.44	1.35	1.26	1.26	1.13	1.22	1.31
Aktual Air (m3/ton tbs)	1.17	1.44	1.92	1.87	1.86	1.77	1.78	1.57	1.52	1.61	1.43	1.37
Air thd Budget (%)	**77**	**84**	**126**	**117**	**125**	**123**	**132**	**124**	**121**	**142**	**118**	**105**
Otomatis												
Budget Air (m3/ton tbs)	1.47	1.63	1.47	1.55	1.44	1.40	1.32	1.24	1.23	1.12	1.20	1.27
Aktual Air (m3/ton tbs)	1.33	1.28	1.33	1.23	1.14	1.22	1.12	1.05	1.04	0.98	1.05	1.13
Air thd Budget (%)	**91**	**79**	**91**	**79**	**80**	**87**	**85**	**85**	**84**	**88**	**88**	**89**

Data Sekunder Biaya Olah

	2025											
Manual	**Jan**	**Feb**	**Mar**	**April**	**Mei**	**Jun**	**Jul**	**Agust**	**Sept**	**Okt**	**Nov**	**Des**
TBS Olah (Ton)	22,157	33,628	25,287	24,979	26,677	25,896	31,006	34,621	36,590	39,465	41,071	44,061
Total Biaya (Rp. 000)	2,644,655	3,953,926	3,177,529	3,011,890	4,199,358	2,850,156	2,673,793	2,632,004	3,053,746	3,842,773	3,145,109	4,385,212
Biaya Olah (Rp/Kg TBS)	**119**	**118**	**126**	**121**	**157**	**110**	**86**	**76**	**83**	**97**	**77**	**99.53**
Otomatis												
TBS Olah (Ton)	16,110	17,574	15,145	17,512	22,182	21,295	23,678	25,451	25,575	28,285	25,281	22,683
Total Biaya (Rp. 000)	1,481,321	1,628,962	1,449,738	1,600,171	1,743,417	1,568,809	2,002,206	1,880,165	1,569,491	1,689,270	1,897,766	1,838,497
Biaya Olah (Rp/Kg TBS)	**92**	**93**	**96**	**91**	**79**	**74**	**85**	**74**	**61**	**60**	**75**	**81**

Lampiran 3. Data Primer Produktivitas

Data Primer Kapasitas Olah thd Budget

	Juni 2026									
Manual	**2**	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
Kapasitas Budget (Ton/Jam)	80	80	80	80	80	80	80	80	80	80
Kapasitas Aktual (Ton/Jam)	75	84	81	78	72	81	81	82	81	81
Kapasitas Olah thd Budget (%)	**94**	**105**	**101**	**98**	**90**	**101**	**101**	**102**	**101**	**101**
Otomatis										
Kapasitas Budget (Ton/Jam)	40	40	40	40	40	40	40	40	40	40
Kapasitas Aktual (Ton/Jam)	45	49	42	44	40	42	42	43	42	42
Kapasitas Olah thd Budget (%)	**113**	**123**	**105**	**110**	**99**	**105**	**105**	**108**	**105**	**106**

Data Primer Produktifitas

	Juni 2026									
Manual	**2**	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
Aktual Kapasitas (TPH)	75	84	81	78	72	81	81	82	81	81
Tenaga Kerja (TK)	50	55	56	56	55	54	56	55	53	54
Produktifitas (TPH/TK)	**1.50**	**1.53**	**1.44**	**1.39**	**1.31**	**1.49**	**1.45**	**1.48**	**1.52**	**1.50**
Otomatis										
Aktual Kapasitas (TPH)	45	49	42	44	40	42	42	43	42	42
Tenaga Kerja (TK)	21	22	21	22	21	22	23	22	22	21
Produktifitas (TPH/TK)	**2.15**	**2.25**	**2.00**	**2.01**	**1.88**	**1.91**	**1.83**	**1.95**	**1.91**	**2.01**

Lampiran 4. Data Sekunder Produktivitas

Data Sekunder Kapasitas Olah

	2025											
Mannual	**Jan**	**Feb**	**Mar**	**April**	**Mei**	**Jun**	**Jul**	**Agust**	**Sept**	**Okt**	**Nov**	**Des**
Aktual Kapasitas (TPH)	80	69	67	72	69	79	81	80	82	72	77	79
Budget Kapasitas (TPH)	80	80	80	80	80	80	80	80	80	80	80	80
Kapasitas Olah thd Budget (%)	**100**	**86**	**84**	**90**	**86**	**99**	**101**	**100**	**102**	**90**	**96**	**98**
Otomatis												
Aktual Kapasitas (TPH)	40	40	41	40	41	41	41	40	39	41	39	41
Budget Kapasitas (TPH)	40	40	40	40	40	40	40	40	40	40	40	40
Kapasitas Olah thd Budget (%)	**101**	**101**	**101**	**100**	**101**	**102**	**103**	**101**	**98**	**102**	**98**	**103**

Data Sekunder Produktifitas

	2025											
Manual	**Jan**	**Feb**	**Mar**	**April**	**Mei**	**Jun**	**Jul**	**Agust**	**Sept**	**Okt**	**Nov**	**Des**
Aktual Kapasitas (TPH)	80	69	67	72	69	79	81	80	82	72	77	79
Tenaga Kerja (TK)	54	54	54	54	54	54	54	54	54	54	54	54
Produktifitas (TPH/TK)	**1.49**	**1.27**	**1.24**	**1.33**	**1.28**	**1.47**	**1.50**	**1.48**	**1.51**	**1.33**	**1.43**	**1.46**
Otomatis												
Aktual Kapasitas (TPH)	40	40	41	40	41	41	41	40	39	41	39	41
Tenaga Kerja	19	19	19	19	19	19	19	19	19	19	19	19
Produktifitas (TPH/TK)	**2.12**	**2.12**	**2.13**	**2.11**	**2.13**	**2.16**	**2.17**	**2.13**	**2.07**	**2.15**	**2.06**	**2.17**

Lampiran 5. Data Primer Losses

Losses in Empty Bunch Stalk (%)	**Juni 2026**									
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
Manual	0.35	0.35	0.35	0.34	0.35	0.33	0.33	0.33	0.33	0.33
Otomatis	0.32	0.31	0.32	0.34	0.33	0.31	0.30	0.33	0.30	0.32

Losses in Fiber ex. Press (%)	**Juni 2026**									
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
SRIM	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.53	0.53	0.53
SKSM	0.53	0.52	0.51	0.51	0.51	0.50	0.49	0.50	0.49	0.51

Losses in Final Effluent (%)	**Juni 2026**									
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
SRIM	0.47	0.47	0.46	0.47	0.47	0.48	0.48	0.47	0.49	0.48
SKSM	0.42	0.46	0.46	0.45	0.46	0.45	0.47	0.43	0.49	0.42

Losses in Fiber Cyclone (%)	**Juni 2026**									
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
SRIM	0.10	0.11	0.11	0.10	0.11	0.10	0.11	0.10	0.10	0.10
SKSM	0.09	0.11	0.10	0.10	0.10	0.09	0.09	0.10	0.11	0.09

Losses in LTDS (%)	**Juni 2026**									
	2	**3**	**4**	**5**	**6**	**8**	**9**	**10**	**11**	**12**
SRIM	0.07	0.09	0.08	0.08	0.09	0.09	0.08	0.08	0.07	0.08
SKSM	0.03	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.03

Lampiran 6. Data Sekunder Losses

Losses in Empty Bunch Stalk (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.33	0.33	0.32	0.33	0.32
Otomatis	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.30	0.30	0.31	0.32	0.32

Losses in Fiber ex. Press (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	0.53	0.52	0.53	0.53	0.53	0.52	0.52	0.53	0.53	0.52	0.53	0.54
Otomatis	0.52	0.52	0.51	0.51	0.51	0.51	0.51	0.50	0.52	0.50	0.50	0.49

Losses in Final Effluent (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	0.51	0.52	0.51	0.53	0.53	0.52	0.53	0.51	0.50	0.50	0.50	0.53
Otomatis	0.46	0.46	0.45	0.46	0.46	0.47	0.46	0.45	0.45	0.45	0.46	0.46

Losses in Fiber Cyclone (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	0.10	0.10	0.10	0.11	0.10	0.10	0.11	0.10	0.11	0.10	0.11	0.10
Otomatis	0.09	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.10	0.10	0.10	0.10

Losses in LTDS (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	0.08	0.08	0.07	0.08	0.08	0.07	0.07	0.07	0.08	0.07	0.08	0.07
Otomatis	0.05	0.04	0.04	0.03	0.04	0.03	0.04	0.04	0.03	0.05	0.04	0.03

Lampiran 7. Data Primer Kualitas Produk

Moisture & Dirt CPO (%)	Juni 2026									
	2	3	4	5	6	8	9	10	11	12
SRIM	0.22	0.19	0.21	0.20	0.21	0.19	0.22	0.23	0.23	0.19
SKSM	0.20	0.16	0.17	0.20	0.18	0.18	0.16	0.17	0.19	0.16

Moisture & Dirt PK (%)	Juni 2026									
	2	3	4	5	6	8	9	10	11	12
SRIM	12.33	15.24	14.17	13.73	12.97	13.80	13.04	13.35	13.28	13.54
SKSM	10.11	12.22	10.10	11.81	11.67	9.50	10.50	10.10	9.60	9.90

Broken kernel (%)	Juni 2026									
	2	3	4	5	6	8	9	10	11	12
SRIM	30.17	31.65	33.12	31.59	32.41	34.29	36.71	35.50	28.43	35.60
SKSM	22.84	27.24	32.72	26.46	32.28	23.71	23.45	26.18	23.73	20.76

Lampiran 8. Data Sekunder Kualitas Produk

Moisture & Dirt CPO (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	0.19	0.19	0.18	0.20	0.18	0.18	0.18	0.20	0.18	0.19	0.19	0.22
Otomatis	0.19	0.16	0.18	0.17	0.18	0.18	0.18	0.17	0.17	0.16	0.19	0.17

Moisture & Dirt PK (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	12.07	12.23	11.94	12.35	11.66	11.42	11.29	11.73	11.88	12.07	12.68	12.17
Otomatis	11.88	11.50	11.20	11.76	11.31	11.15	11.69	11.49	11.64	11.78	10.85	10.45

Broken Kernel (%)	2025											
	Jan	Feb	Mar	April	Mei	Jun	Jul	Agust	Sept	Okt	Nov	Des
Manual	30.46	27.65	34.88	31.16	29.30	36.03	32.75	36.46	34.26	34.93	30.58	33.61
Otomatis	20.77	20.46	23.75	23.25	24.76	25.17	31.12	29.66	30.49	22.69	26.31	28.86