ENERGY POTENTIAL IN EMPTY FRUIT BUNCHES

FFB processed per hour (t)	90	80	60	45	40	30	20	10
Processing hours per year (t hr^{-1} x 20 x 300)	600	600	600	600	600	600	600	600
FFB processed (t yr^{-1})	54 000	48 000	36 000	27 000	24 000	18 000	12 000	6 000
EFB as a % of FFB processed (%)	23	23	23	23	23	23	23	23
EFB generated (t yr^{-1})	12 420	11 040	8 280	6 210	5 520	4 140	2 760	1 380
Initial moisture (%)	67	67	67	67	67	67	67	67
Wet weight (t)	8 321	7 397	5 548	4 161	3 698	2 774	1 849	925
Dry weight (t)	4 099	3 643	2 732	2 049	1 822	1 366	911	455
Lower cal. value (M kg^{-1})	18.795	18.795	18.795	18.795	18.795	18.795	18.795	18.795
Gross energy content in EFB (MJ kg^{-1})	77 033	68 474	51 355	38 517	34 237	25 678	17 118	8 559
Enthalapy of evaporation (MJ kg^{-1})	2.258	2.58	2.58	2.58	2.58	2.58	2.58	2.58
Final desired moisture (%)	40	40	40	40	40	40	40	40
Mass of moisture to be evaporated	3 353	2 981	2 236	1 677	1 490	1 118	745	373
Heat required for moisure evaporation (MJ)	8 652	7 690	5 768	4 326	3 845	2 884	1 923	961
Net energy in EFB (MJ)	68 381	60 783	45 588	34 191	30 392	22 794	15 196	7 598
Tharmal efficiency -power generation (%)	23	23	23	23	23	23	23	23
Energy output/generator output (MJ)	15 728	13 980	10 485	7 864	6 990	5 243	3 495	1 748
Energy output/generator output in m Whr	4 369	3 883	2 913	2 184	1 942	1 456	971	485
Operating hours per year (hr) 20 hr x 300 d	6 000	6 000	6 000	6 000	6 000	6 000	6 000	6 000
Power plant size (MW)	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.1
Drying energy as a % to total energy	11	11	11	11	11	11	11	11