

Table S5. Cost calculation for loader

	A	B	C
1		Loader	
2	Time	Base year	
3	Production	Non-Frozen	Frozen
4	Annual Production (m ³)	750,000	1,400,000
5	Days	106	83
6	Hours/Day	21	19
7	Input		
8	Annual Available Hours	2,226	1,577
9	Utilization Percentage [42]	60	60
10	Annual Production Hours	1,336	946
11	Expected Life (Years) [49]	5.00	
12	Purchase Information		
13	Equipment Purchase Cost (\$) [46]	585,000	
14	Salvage Value (%) [49]	0.30	
15	Fuel Price (\$) [41]	175,500	
16	Oil Lube Costs (%) [41]	1.00	
17	Insurance Costs (%) [41]	0.10	
18	Load Factor	0.035	
19	Salvage Value (\$)	0.25	
20	Rate of Return on Total Capital	380,250	
21	Average Annual Equipment Value (\$)	0.10	
22	Fuel Consumption (lt/hr) [50]	26.00	28.00
23	Ownership Costs		
24	Depreciation (\$/year)	81,900	
25	Insurance (\$/year)	13,309	
26	Return on Capital (\$/year)	38,025	
27	Annual Ownership Costs (\$/year)	133,234	
28	Total Ownership Costs (\$/year)	1,465,571	
29	Total Ownership Unit Cost (\$/m³)	0.68	
30	Labor Costs		
31	Straight Time	1,908	1,494
32	Overtime Worked	318	83
33	Wage (\$/hr) [32]	29.29	29.29
34	Overtime (\$/hr)	43.94	43.94
35	Seasonal Labor Costs (\$)	69,857	47,406
36	Add Employee Load (Benefits)	17,464	11,851
37	Total Labour Costs (\$)	87,321	59,257
38	Total Labor Unit Costs (\$/m³)	0.81	0.78
39	Operation Costs		
40	Fuel cost (\$/hr)	26.00	28.00
41	Oil/Lube Cost (\$/hr)	2.60	2.80
42	Fuel & Lube Cost (\$/m ³)	0.05	0.02
43	Repair & Maintenance Costs (\$/year)	65,520	
44	Repair & Maintenance Costs (\$/m ³)	0.356	
45	Total Operation Costs (Season)	57,213	44,032
46	Total Operation Unit Costs (\$/m³)	0.53	0.58
47	Total Equipment Unit Costs (seasonal) (\$/m³)	2.02	2.03
48	Number of Equipments	5	11
49	Prodcutivity (m ³ /Pmh) ¹	95.00	95.00
50	Availability (%)	0.85	0.85
51	Productivity (m ³ /Smh)	80.75	80.75
52	¹ obtained from manufacturer		