



NSW DEPARTMENT OF PRIMARY INDUSTRIES

GUIDE TO TRACTOR AND IMPLEMENT COSTS

57 KW PTO (76 HP) AND 70 KW ENGINE (95 HP)

Example tractor : Case JX1090U, JD 6230

New price: \$60,824
 Trade-in price: 45% of new = \$27,371
 Interest rate: 10%

Yearly work: 1000 hrs/yr
 Age at trade-in: 5000 hrs = 5.00 years

Tractor Overhead Costs		per year cost	per hour cost
Depreciation = $(\$60824 - \$27370.8) / 5 \text{ yrs} =$		\$6,691	\$6,691 / 1000hrs/yr = \$6.69
Interest = $(\$60824 + \$27370.8) / 2 * 10\% =$		\$4,410	\$4,410 / 1000hrs/yr = \$4.41
Insurance = $(\$10 / \$1000) * (\$60824 + \$27370.8) / 2 =$		\$441	\$441 / 1000hrs/yr = \$0.44
			Tractor Overhead Costs: \$11.54/hr
Tractor Variable Costs			
Item	No.	Cost	Use
Diesel fuel		\$1.12/L	15 L/hr
Engine oil		\$6.40/L	10L/250hrs
Transmission oil		\$6.00/L	100L/1000hrs
Air filter - inner	1	\$83/filter	1500 hrs/filter
Air filter - outer	1	\$40/filter	1500 hrs/filter
Rear cab filter	2	\$34/filter	1500 hrs/filter
Fuel filter	1	\$36/filter	500 hrs/filter
Hydraulic oil filter	1	\$46/filter	750 hrs/filter
Oil filter	1	\$14/filter	250 hrs/filter
Transmission oil filter	1	\$124/filter	750 hrs/filter
Tyres - large 480-70R34	2	\$2,275/tyre	3500 hrs/tyre
Tyres - small 440-70R24	2	\$1,150/tyre	3500 hrs/tyre
Tubes - large	2	\$0/tube	6000 hrs/tube
Tubes - small	2	\$0/tube	6000 hrs/tube
Batteries	2	\$438/battery	3 yrs/battery
Repairs		2% tractor price/yr	
			Variable Costs Summary
			FUEL: \$16.78/hr
			OIL: \$0.86/hr
			FILTERS: \$0.48/hr
			TYRES: \$1.96/hr
			TUBES: \$0.00/hr
			BATTERIES: \$0.29/hr
			REPAIRS: \$1.22/hr
			Tractor Variable Costs: \$21.58/hr
			TOTAL Tractor Costs per hour: \$33.12/hr
(Based on 800 hours work per year)			

Example Implements:

	(a)New price	(b)Trade-in	(c)Work hours/yr	(d)Trade-in age
Offset disc: 2.7m width: 8km/ha: 1.728ha/hr	\$22,000	\$7,700	200	9 years
Scarifier: 3.7m width: 8km/ha: 2.368ha/hr	\$17,000	\$5,950	250	9 years
Combine + small seed box: 4.3m width: 10km/ha: 3.44ha/hr	\$35,000	\$12,250	150	9 years
Spray unit: 12.2m width: 10km/ha: 10.37ha/hr	\$25,000	\$8,750	150	9 years
Super spreader: 10m width: 15km/ha: 10.5ha/hr	\$2,000	\$700	50	4 years
Harrows: 12.2m width: 12km/ha: 12.444ha/hr	\$5,000	\$1,750	150	9 years
Grader: 3m width: 5km/ha: 1.275ha/hr	\$5,000	\$1,750	50	9 years
Banker: 2m width: 5km/ha: 0.85ha/hr	\$8,000	\$2,800	50	9 years
Disc mower-conditioner: 3m width: 10km/ha: 2.4ha/hr	\$38,000	\$13,300	200	9 years
Rake: 3m width: 10km/ha: 2.4ha/hr	\$10,000	\$3,500	200	9 years
	\$45,000	\$15,750	150	9 years

Implement	Overhead Costs		Variable costs (g)Repair \$/yr 5%	Variable cost/hour g/c	Yearly Cost (h) e+f+g	Hourly Cost h/c
	(e)Depreciation (a-b)/d	(f) Interest ((a+b)/2)*10%				
Offset disc	\$1,589	\$1,485	\$1,100	\$5.50	\$4,174	\$20.87
Scarifier	\$1,228	\$1,148	\$850	\$3.40	\$3,225	\$12.90
Combine + small seed box	\$2,528	\$2,363	\$1,750	\$11.67	\$6,640	\$44.27
Spray unit	\$1,806	\$1,688	\$1,250	\$8.33	\$4,743	\$31.62
Super spreader	\$325	\$135	\$100	\$2.00	\$560	\$11.20
Harrows	\$361	\$338	\$250	\$1.67	\$949	\$6.32
Grader	\$361	\$338	\$250	\$5.00	\$949	\$18.97
Banker	\$578	\$540	\$400	\$8.00	\$1,518	\$30.36
Disc mower-conditioner	\$2,744	\$2,565	\$1,900	\$9.50	\$7,209	\$36.05
Rake	\$722	\$675	\$500	\$2.50	\$1,897	\$9.49
Hay baler + hydraulic pickup	\$3,250	\$3,038	\$2,250	\$15.00	\$8,538	\$56.92

Tractor and Implement Combinations

Variable Costs used in budgets
(based on hours/yr work as above)

	\$/hr	Speed
Tractor + Offset disc	\$27.08	0.58 hrs/ha
Tractor + Scarifier	\$24.98	0.42 hrs/ha
Tractor + Combine + small seed box	\$33.25	0.29 hrs/ha
Tractor + Spray unit	\$29.92	0.10 hrs/ha
Tractor + Super spreader	\$23.58	0.10 hrs/ha
Tractor + Harrows	\$23.25	0.08 hrs/ha
Tractor + Grader	\$26.58	0.78 hrs/ha
Tractor + Banker	\$29.58	1.18 hrs/ha
Tractor + Disc mower-conditioner	\$31.08	0.42 hrs/ha
Tractor + Rake	\$24.08	0.42 hrs/ha
Tractor + Hay baler + hydraulic pickup	\$36.58	0.42 hrs/ha

12

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Machine	Width (m)	Speed	Efficiency	ha/hrs	hrs/ha
Offset disc	2.7	8 km/hr	80%	1.73	0.58
Scarifier	3.7	8 km/hr	80%	2.37	0.42
Combine + small seed box	4.3	10 km/hr	80%	3.44	0.29
Spray unit	12.2	10 km/hr	85%	10.37	0.10
Super spreader	10	15 km/hr	70%	10.50	0.10
Harrows	12.2	12 km/hr	85%	12.44	0.08
Grader	3	5 km/hr	85%	1.28	0.78
Banker	2	5 km/hr	85%	0.85	1.18
Disc mower-conditioner	3	10 km/hr	80%	2.40	0.42
Rake	3	10 km/hr	80%	2.40	0.42
Hay baler + hydraulic pickup	3	10 km/hr	80%	2.40	0.42