



# NSW DEPARTMENT OF PRIMARY INDUSTRIES

## GUIDE TO TRACTOR AND IMPLEMENT COSTS

149 KW PTO (200 HP) AND 177 KW ENGINE (240 HP)

Example tractor : John Deere 8230, Case IH MX230LINKAGE+FWA

New price: **\$178,875**  
 Trade-in price: 45% of new = \$80,494  
 Interest rate: 10%

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

<u>Tractor Overhead Costs</u>		<u>per year cost</u>	<u>per hour cost</u>		
Depreciation = (\$178875-\$80493.75)/5 yrs =		\$19,676	\$19,676 /1000hrs/yr= \$19.68		
Interest = ((\$178875+\$80493.75)/2)*10% =		\$12,968	\$12,968 /1000hrs/yr= \$12.97		
Insurance = ((\$10/\$1000)*(\$178875+\$80493.75)/2) =		\$1,297	\$1,297 /1000hrs/yr= \$1.30		
			Tractor Overhead Costs: \$33.94/hr		
<u>Tractor Variable Costs</u>		<u>Cost</u>	<u>Use</u>	<u>Variable Costs Summary</u>	
<u>Item</u>	<u>No.</u>				
Diesel fuel		\$1.12/L	36 L/hr	FUEL:	\$40.27/hr
Engine oil		\$6.20/L	21L/200hrs		
Transmission oil		\$6.00/L	122L/1000hrs	OIL:	\$1.38/hr
Air filter - inner	1	\$96/filter	800 hrs/filter		
Air filter - outer	1	\$149/filter	400 hrs/filter		
Fuel filter	1	\$173/filter	500 hrs/filter		
Hydraulic/Trans oil filter	2	\$72/filter	750 hrs/filter		
Oil filter	1	\$30/filter	250 hrs/filter	FILTERS:	\$1.15/hr
Tyres- large 20.8*42	4	\$2,450/tyre	3000 hrs/tyre	TYRES:	\$4.73/hr
Tyres- small 16.9 * 28	2	\$1,095/tyre	1500 hrs/tyre	BATTERIES:	\$0.40/hr
Batteries	2	\$594/battery	3 yrs/battery	REPAIRS:	\$3.58/hr
Repairs		2% tractor price/yr			
				Tractor Variable Costs:	\$51.50/hr
				TOTAL Tractor Costs per hour:	\$85.44/hr
				(Based on 1000 hours work per year)	

Example Implements:

	<u>(a)New price</u>	<u>(b)Trade-in</u>	<u>(c)Work</u>	<u>(d)Trade-in</u>
		0.35	hours/yr	age
Chisel plough: 7m width: 8km/ha: 4.48ha/hr	\$55,000	\$19,250	200	9 years
Offset disc plough: 4.5m width: 8km/ha: 2.88ha/hr	\$39,000	\$13,650	250	9 years
Cultivator: 7.3m width: 10km/ha: 5.84ha/hr	\$50,000	\$17,500	250	9 years
Conventional air seeder+harrow: 8.5m width: 10km/ha: 5.95ha/hr	\$82,000	\$28,700	150	9 years
Min-till air seeder+harrow: 7.3m width: 10km/ha: 5.11ha/hr	\$99,000	\$34,650	150	9 years
Spray unit: 18.2m width: 12km/ha: 18.564ha/hr	\$19,000	\$6,650	150	9 years
Chaser bin: m width: km/ha: ha/hr	\$30,000	\$10,500	150	9 years
Rice roller: 6m width: 10km/ha: 5.1ha/hr	\$7,000	\$2,450	100	9 years
Combine (rice): 5.1m width: 10km/ha: 3.57ha/hr	\$35,000	\$12,250	150	9 years
Bed reneavator: 8m width: 6km/ha: 3.84ha/hr	\$34,000	\$11,900	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%				
Chisel plough	\$3,972	\$3,713	\$2,750	\$13.75	\$10,435	\$52.17
Offset disc plough	\$2,817	\$2,633	\$1,950	\$7.80	\$7,399	\$29.60
Cultivator	\$3,611	\$3,375	\$2,500	\$10.00	\$9,486	\$37.94
Conventional air seeder+harrow	\$5,922	\$5,535	\$4,100	\$27.33	\$15,557	\$103.71
Min-till air seeder+harrow	\$7,150	\$6,683	\$4,950	\$33.00	\$18,783	\$125.22
Spray unit	\$1,372	\$1,283	\$950	\$6.33	\$3,605	\$24.03
Chaser bin	\$2,167	\$2,025	\$1,500	\$10.00	\$5,692	\$37.94
Rice roller	\$506	\$473	\$350	\$3.50	\$1,328	\$13.28
Combine (rice)	\$2,528	\$2,363	\$1,750	\$11.67	\$6,640	\$44.27
Bed reneator	\$2,456	\$2,295	\$1,700	\$11.33	\$6,451	\$43.00

Tractor and Implement Combinations

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

	\$/hr	Speed
Tractor + Chisel plough	\$65.25/hr	0.22 hrs/ha
Tractor + Offset disc plough	\$59.30/hr	0.35 hrs/ha
Tractor + Cultivator	\$61.50/hr	0.17 hrs/ha
Tractor + Conventional air seeder+harrow	\$78.84/hr	0.17 hrs/ha
Tractor + Min-till air seeder+harrow	\$84.50/hr	0.20 hrs/ha
Tractor + Spray unit	\$57.84/hr	0.05 hrs/ha
Tractor + Chaser bin	\$61.50/hr	0.00 hrs/ha
Tractor + Rice roller	\$55.00/hr	0.20 hrs/ha
Tractor + Combine (rice)	\$63.17/hr	0.28 hrs/ha
Tractor + Bed reneator	\$62.84/hr	0.26 hrs/ha

**130-140 KW PTO (173-180 HP) AND 150-160 KW ENGINE (205-215 HP)**

Machine	Width (m)	Speed	Efficiency	ha/hrs	hrs/ha
Chisel plough	7.00	8 km/hr	80%	4.48	0.22
Offset disc plough	4.50	8 km/hr	80%	2.88	0.35
Cultivator	7.30	10 km/hr	80%	5.84	0.17
Conventional air seeder+harrow	8.50	10 km/hr	70%	5.95	0.17
Min-till air seeder+harrow	7.30	10 km/hr	70%	5.11	0.20
Spray unit	18.20	12 km/hr	85%	18.56	0.05
Chaser bin					
Rice roller	6.00	10 km/hr	85%	5.10	0.20
Combine (rice)	5.10	10 km/hr	70%	3.57	0.28
Bed reneator	8.00	6 km/hr	80%	3.84	0.26