

# FINANCIAL ASSUMPTIONS FOR A FULLY IRRIGATED OIL ONLY OLIVE GROVE

(1 HECTARE - 2.5 ACRES)

THIS PARTICULAR SHEET DOES NOT COVER THE PRODUCTION OF TABLE OLIVES OR VALUE ADDING BY THE PROCESSING AND MARKETING OF YOUR OWN OLIVE PRODUCTS AND DOES NOT ACCOUNT FOR GST.

This Financial Sheet assumes that the grower simply harvests the olives and sells them to an oil processor who keeps the oil.

Much better Yearly Profits can be made if the grower sells the fruit to a pickling factory or fresh fruit market or 'value adds' the product by selling the oil themselves, however this paper deals solely with the scenario of selling all olives to an oil processor.

General assumptions based on a fully irrigated olive grove planted with a 20% yield oil variety solely for oil production.

Tractor, slasher and simple implements are owned by grower and grower attends to any slashing, spraying and general maintenance personally.

Tree density = 250 trees per hectare on 8m X 5m spacing.



## CAPITAL OUTLAY

Land	Owned																			
Irrigation	\$1,575	Pump owned. Costs include (50mm) 2" header line = \$40, 40mm disc filter = \$150, 1,250m X 25mm (1") Class B agricultural grade poly pipe = \$600, mixed pipe fittings \$160, 250 adjustable Waterbird® Olive Sprinklers = \$625																		
Land Preparation	\$870	Manure and crusher dust = \$720 If your soils are too acidic you may also need to add lime prior to deep ripping. Tractor work - 10 - 15 hours depending on hardness of ground. Fuel and wear and tear calculated at \$15/hr.																		
Olive Trees	\$1,250	250 trees at approx \$5 per tree delivered.																		
Planting	\$325	Cost for spoil mulch bales at \$2 per bale for every 2-3 trees and 35 cents per tree for a bamboo stake.																		
<b>Total Capital Outlay</b>	<b>\$4,020</b>	<b>per hectare</b>																		

Year	1	2	3	4	5	6	7	8	9	10
Fruit Yield kg/tree				10	20	30	40	50	60	70
Total Yield kg/hectare				2,500	5,000	7,500	10,000	12,500	15,000	17,500
Sale of fruit - To oil processor at average price of \$0.60/kg				1,500	3,000	4,500	6,000	7,500	9,000	10,500
NB. 2000 research revealed that Australian olive oil processors were paying between \$0.80 and \$1.80 per kg for fresh olives. We have been conservative in our figuring by putting the price at \$0.60/kg.										
<b>Total Yearly Income</b>				<b>\$1,500</b>	<b>\$3,000</b>	<b>\$4,500</b>	<b>\$6,000</b>	<b>\$7,500</b>	<b>\$9,000</b>	<b>\$10,500</b>

Year	1	2	3	4	5	6	7	8	9	10
SLASHING - with own tractor/slasher 5 times per year (fuel + wear and tear)	75	75	75	75	75	75	75	75	75	75
WEED CONTROL - using back-pack sprayer 3 times per year (chemical cost only)	50	50	60	60	70	70	80	80	90	100
FERTILISING - using a combination of manure and chemical fertilisers. (See Footnote 1. below for other cost options)	-	50	100	200	300	400	500	500	500	500
INSECT CONTROL - using back-pack sprayer as needed (chemical cost only)	50	50	60	60	70	70	80	80	90	100
PRUNING - twice a year from Year 4 to maximise crop	50	70	90	200	240	270	300	330	330	330
POWER FOR PUMP (averaged over 10 years)	75	75	75	75	75	75	75	75	75	75
HARVESTING - (Hand picked at approx. \$0.20/kg in Yr 4 when some trees may be too small for shaking. Machine Harvester - approx \$150/ton from Year 5 on).				500	750	1,125	1,500	1,875	2,250	2,625
FREIGHT - to a local processor at approx. \$15/tonne				38	75	113	150	188	225	263
GENERAL MAINTENANCE	100	100	100	100	100	100	100	100	100	100
TOTAL COSTS	\$400	\$470	\$560	\$1,308	\$1,755	\$2,298	\$2,860	\$3,303	\$3,735	\$4,168
CAPITAL OUTLAY	\$4,020	-	-	-	-	-	-	-	-	-
TOTAL YEARS EXPENSE	\$4,420	\$470	\$560	\$1,308	\$1,755	\$2,298	\$2,860	\$3,303	\$3,735	\$4,168
TOTAL YEARS INCOME	-	-	-	\$1,500	\$3,000	\$4,500	\$6,000	\$7,500	\$9,000	\$10,500
Yearly Profit/Loss	-\$4,420	-\$470	-\$560	\$192	\$1,245	\$2,202	\$3,140	\$4,197	\$5,265	\$6,332

FOOTNOTE 1. - Although chemical fertilisers are cheaper and more easily applied than manures, they may not be as good for the tree and soil in the long term. Using Department of Agriculture figures of \$130/ha for chemical fertilisers, the Yearly Profit from Year 10 on is \$6,702/ha. Using only more expensive natural manures at \$1,500/ha, the Yearly Profit from Year 10 on is \$5,332/ha. We leave this decision up to the grower's own fertiliser preference.

**From the above calculations for one hectare of oil only olives, the yearly profit/loss for 2, 3, 4 & 40 hectares is as follows:**

Year	1	2	3	4	5	6	7	8	9	10
2 hectares (5 acres) 500 trees	-\$8,840	-\$940	-\$1,120	\$384	\$2,490	\$4,404	\$6,280	\$8,394	\$10,530	\$12,664
3 hectares (7.5 acres) 750 trees	-\$13,260	-\$1,410	-\$1,680	\$576	\$3,735	\$6,606	\$9,420	\$12,591	\$15,795	\$18,996
4 hectares (10 acres) 1000 trees	-\$17,680	-\$1,880	-\$2,240	\$768	\$4,980	\$8,808	\$12,560	\$16,788	\$21,060	\$25,328
40 hectares (100 acres) 10,000 trees	-\$176,800	-\$18,800	-\$22,400	\$7,680	\$49,800	\$88,080	\$125,600	\$167,880	\$210,600	\$253,280

Keep in mind, as the size of the grove increases, certain costs will be reduced due to bulk purchasing and processing.

**We invite your comments on the above so that we can continue to be as accurate and informative as possible.**

# FINANCIAL ASSUMPTIONS FOR AN IRRIGATED OLIVE GROVE (1 HECTARE - 2.5 ACRES)

General assumptions based on a fully irrigated olive grove planted with  
'dual purpose' Manzanillo variety for pickling and oil production (GST not accounted for).

Tree density = 250 trees per hectare on 8m x 5m spacing.

The grove is assumed to be **family owned and operated** therefore no payment for outside labour has been included.

Tractor, slasher and simple implements are owned by the grower.

CAPITAL OUTLAY		
Land	Owned	
Irrigation	\$1,575	Pump owned. Costs include (50mm) 2" header line = \$40, 40mm disc filter = \$150, 1,250m X 25mm (1") Class B agricultural grade poly pipe = \$600, mixed pipe fittings \$160, 250 adjustable Waterbird® Olive Sprinklers = \$625
Land Preparation	\$870	Manure and crusher dust = \$720 If your soils are too acidic you may also need to add lime prior to deep ripping. Tractor work - 10 - 15 hours depending on hardness of ground. Fuel and wear and tear calculated at \$15/hr.
Olive Trees	\$1,250	250 trees at approx \$5 per tree delivered.
Planting	\$325	Cost for spoil mulch bales at \$2 per bale for every 2-3 trees and 35 cents per tree for a bamboo stake.
<b>Total Capital Outlay</b>	<b>\$4,020</b>	

Year	1	2	3	4	5	6	7	8	9	10
Fruit Yield kg/tree				10	20	30	40	50	60	70
Total Yield kg/hectare				2,500	5,000	7,500	10,000	12,500	15,000	17,500
<b>Sale of fruit - Average prices per kg</b>										
1. 30% of crop to Produce Markets \$2.00/kg				1,500	3,000	4,500	6,000	7,500	9,000	10,500
2. 50% of crop to Pickling Factory \$1.30/kg				1,625	3,250	4,875	6,500	8,125	9,750	11,375
3. 20% of crop to Oil Processor \$0.60/kg (Undersize/damaged fruit)				300	600	900	1,200	1,500	1,800	2,100
<b>Total Yearly Income</b>				<b>\$3,425</b>	<b>\$6,850</b>	<b>\$10,275</b>	<b>\$13,700</b>	<b>\$17,125</b>	<b>\$20,550</b>	<b>\$23,975</b>

Year	1	2	3	4	5	6	7	8	9	10
SLASHING - with own tractor/slasher 5 times per year (fuel + wear and tear)	75	75	75	75	75	75	75	75	75	75
WEED CONTROL - using back-pack sprayer 3 times per year (chemical cost only)	50	50	60	60	70	70	80	80	90	100
FERTILISING - using bought manure - chemical fertiliser is cheaper and more easily applied but may not be as good for the trees and soil in the long term.	-	50	100	300	500	700	900	1,100	1,300	1,500
INSECT CONTROL - using back-pack sprayer as needed (chemical cost only)	50	50	60	60	70	70	80	80	90	100
PRUNING - family labour used	-	-	-	-	-	-	-	-	-	-
POWER FOR PUMP (averaged over 10 years)	75	75	75	75	75	75	75	75	75	75
HARVESTING - hand picked by family (Hired pickers will cost approx. \$0.20/kg for oil fruit (\$80-\$120/day) or \$0.40/kg for more carefully picked table olives).										
FREIGHT 30% of crop to Capital City Market at approx. \$40/tonne 70% of crop to Local Processor at approx. \$10/tonne				30 20	60 35	90 50	120 70	150 85	180 105	210 120
MAINTENANCE	100	100	100	100	100	100	100	100	100	100
<b>TOTAL COSTS</b>	<b>\$350</b>	<b>\$400</b>	<b>\$470</b>	<b>\$720</b>	<b>\$985</b>	<b>\$1,230</b>	<b>\$1,500</b>	<b>\$1,745</b>	<b>\$2,015</b>	<b>\$2,280</b>
<b>CAPITAL OUTLAY</b>	<b>\$4,020</b>									
<b>TOTAL YEARS EXPENSE</b>	<b>\$4,370</b>	<b>\$400</b>	<b>\$470</b>	<b>\$720</b>	<b>\$985</b>	<b>\$1,230</b>	<b>\$1,500</b>	<b>\$1,745</b>	<b>\$2,015</b>	<b>\$2,280</b>
<b>TOTAL YEARS INCOME</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$3,425</b>	<b>\$6,850</b>	<b>\$10,275</b>	<b>\$13,700</b>	<b>\$17,125</b>	<b>\$20,550</b>	<b>\$23,975</b>
<b>YEARLY PROFIT/LOSS</b>	<b>-\$4370</b>	<b>-\$400</b>	<b>-\$470</b>	<b>\$2,705</b>	<b>\$5,865</b>	<b>\$9,045</b>	<b>\$12,200</b>	<b>\$15,380</b>	<b>\$18,535</b>	<b>\$21,695</b>

From the above calculations for one hectare of olives, the yearly profit/loss for 2, 3 and 4 hectares is as follows:

\* With these larger plantings, outside labour costs may have to be considered at harvesting time. All profit figures are 'before tax'

Year	1	2	3	4	5	6	7	8	9	10
2 hectares (5 acres) 500 trees	-\$8,740	-\$800	-\$940	\$5,410	\$11,730	\$18,090	\$24,400	\$30,760	\$37,070	\$43,390
3 hectares (7.5 acres) 750 trees	-\$13,110	-\$1,200	-\$1,410	\$8,115	\$17,595	\$27,135	\$36,600	\$46,140	\$55,605	\$65,085
4 hectares (10 acres) 1,000 trees	-\$17,480	-\$1,600	-\$1,880	\$10,820	\$23,460	\$36,180	\$48,800	\$61,520	\$74,140	\$86,780

The above figures are estimates for properly managed olive groves from 1ha (250 trees) to 4ha (1,000 trees).

We invite your comments on the above so that we can continue to be as accurate and informative as possible.