



# WATER BUDGET CALCULATOR

Crop: **Late Season Apple**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Monthly ETo (mm)	254	207	186	144	102	48	56	87	81	146	195	254
Average Daily ETo (mm)	8.2	7.4	6.0	4.8	3.3	1.6	1.8	2.8	2.7	4.7	6.5	8.2
Average (mean) Rainfall (mm/month)	16.8	20.4	25.2	56.2	130.9	205.3	220.7	168.6	122.7	67.9	42.1	12.4
Aver. Rainfall - Decile 1 (mm/month)	0.0	0.0	0.4	7.2	57.2	109.2	123.6	88.8	59.2	26.0	13.9	0.6
Effective Rainfall Fraction	0.6											
Effective Rainfall - Average Year (mm)	10.1	12.2	15.1	33.7	78.5	123.2	132.4	101.2	73.6	40.7	25.3	7.4
Effective Rainfall - Decile 1 Year (mm)	0.0	0.0	0.2	4.3	34.3	65.5	74.2	53.3	35.5	15.6	8.3	0.4

## CROP WATER REQUIREMENT & IRRIGATION SUMMARY

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Crop Factor	0.90	0.90	0.90	0.90						0.30	0.90	0.90
Crop Water Requirement (mm/month)	228.8	186.5	167.4	129.6	0.0	0.0	0.0	0.0	0.0	43.7	175.5	228.8
Water Deficit												
<i>Average Rainfall Month (mm)</i>	218.7	174.2	152.3	95.9	0	0	0	0	0	3.0	150.2	221.3
<i>Decile 1 Rainfall Month (mm)</i>	228.8	186.5	167.2	125.3	0	0	0	0	0	28.1	167.2	228.4
Irrigation Requirement												
<i>Average Rainfall Month (kL)</i>	2187	1742	1523	959	0	0	0	0	0	30	1502	2213
<i>Decile 1 Rainfall Month (kL)</i>	2288	1865	1672	1253	0	0	0	0	0	281	1672	2284

Average Annual Evaporation **1760 mm**  
 Average Annual Rainfall **1089 mm**  
 Annual Crop Water Requirement **1160 mm**

Current Crop Allocation (kL/ha/yr) **10,000**  
 Crop Area or Property size (ha) **1.0**  
 Licensed Allocation (kL/yr) **10,000**  
 System Efficiency (DU<sub>25</sub>%) **0.79**

## ALLOCATION SUMMARY

Theoretical Irrigation Requirement

<i>Average Rainfall Year</i>	<b>10,157</b>	<b>kL/yr</b>
<i>Decile 1 Rainfall Year</i>	11,314	kL/yr

Calculated Crop Allocation (DU% Adjusted)

<i>Average Rainfall Year</i>	<b>12,856</b>	<b>kL/yr</b>
<i>Decile 1 Rainfall Year</i>	14,321	kL/yr

Potential Crop Area - Current Allocation (DU% Adjusted)

<i>Average Rainfall Year</i>	<b>0.8</b>	<b>ha</b>
<i>Decile 1 Rainfall Year</i>	0.7	ha

Additional Comments: 79% = new system efficiency with nelson R5 sprinklers, 4mx4m triangular spacing.