

FRUIT PLANTATION & VEGETABLE IRRIGATION

Papa Pump Hydro Ram Zero Energy System
V
Diesel Pump System

MASSIVE COST SAVINGS POSSIBLE + ZERO CARBON!

CASE STUDY

LOCATION:
MALAYSIA



DIESEL PUMP

Typical cost of installing and operating a Diesel Pump

<u>2 Hectares Vegetable Farm</u>	Cost (US\$)
INSTALLATION COSTS	
Diesel Engine & Pump	1,967
Piping and other equipment	8,233
Installation Cost	3,606
Miscellaneous	1,148
Total Installation cost	\$14,954
10yr DEPRECIATION (Yearly costs)	\$1,495
OPERATION COSTS (300 days per year)	
Diesel and Labour (unskilled) per year	\$9,614
Total Yearly Cost	\$11,109
CO₂ emissions (kg per year)	68,192

40 Hectares Plantation

INSTALLATION COSTS	
Diesel Engine & Pump	6,557
Piping and other equipment	66,531
Installation Cost	6,755
Miscellaneous	2,616
Total Installation cost	\$82,459
10yr DEPRECIATION (Yearly costs)	\$8,246
OPERATION COSTS (160 days per year)	
Diesel and Labour (unskilled) per year	\$7,520
Total Yearly Cost	\$15,766
CO₂ emissions (kg per year)	368,238

PAPA PUMP

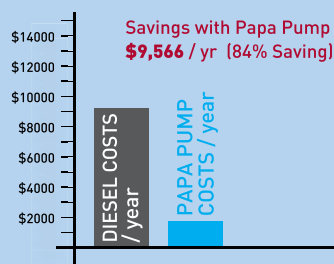
Typical cost of installing and operating a Papa Pump

<u>2 Hectares Vegetable Farm</u>	Cost (US\$)
INSTALLATION COSTS (3 Pump System)	
3 x Papa Pumps	3,000
Piping and other equipment	8,889
Installation Cost	2,131
Miscellaneous	1,311
Total Installation cost	\$15,331
10yr DEPRECIATION (Yearly costs)	\$1,533
OPERATION COSTS (300 days per year)	
Cost of internal valves (\$30 every 3 years)	\$10
Total Yearly Cost	\$1,543
CO₂ emissions (kg per year)	ZERO

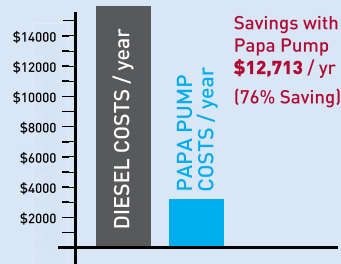
40 Hectares Plantation

INSTALLATION COSTS (6 Pump System)	
6 x Papa Pumps	6,000
Piping and other equipment	17,777
Installation Cost	4,262
Miscellaneous	2,289
Total Installation cost	\$30,328
10yr DEPRECIATION (Yearly costs)	\$3,033
OPERATION COSTS (160 days per year)	
Cost of internal valves (\$60 every 3 years)	\$20
Total Yearly Cost	\$3,053
CO₂ emissions (kg per year)	ZERO

2 Ha Vegetable Farm Costs and Savings



40 Ha Plantation Costs and Savings



Papa Pump®



the pump that uses no fuel!