

**One Harvest**  
**Capital Expenditure Proposal**  
**NIR GUN x 5**

**Project Owner:** Kieren Brown

**Project Manager:** Kym Christiansen

**Executive Summary**

It is proposed to invest \$45,693 to buy 5 new NIR guns as opposed to the current process of leasing them each year.

Previously 5 NIR guns have been leased from Central QLD University at a cost of \$27k per season. The guns they provide are becoming old and the technology they use is no longer supported and is obsolete.

The expected life of each gun is 5 years

The budget form 15/16 does not include this capital spend but it does include \$27,000 lease cost. This will be saved if this capex is approved.

	<b>Amount Requested</b>	<b>Budget</b>	<b>Variance</b>
Investment	\$45,693	\$0	(\$45,693)
NPV @ 20%	\$19,029		
IRR	37.8 %		

<b>Month</b>	<b>Proposed Cashflow</b>	<b>Budget Cashflow</b>	<b>Cumulative Cashflow Proposed</b>	<b>Cumulative Cashflow Budget</b>	<b>Cashflow Difference</b>
<b><u>Aug</u></b>	(45,693)		(45,693)		(45,693)
<b><u>Oct</u></b>		(13,500)	(45,693)	(13,500)	(32,193)
<b><u>Apr</u></b>		(13,500)	(45,693)	(27,000)	(18,693)

**Current Situation**

The NIR guns are an integral part of the decision to pick and feed into the DSS software to map orchard maturity and develop the harvest plan.

NIRS technology provides a non-destructive method of quality control in supply chain management of fresh fruit. For Calypso™, the internal parameters of percent dry matter and flesh colour are used as maturity indices and give immediate result vs the traditional method that involves destruction of fruit and 48 hours to process.

Felix Instruments has developed a new unit to replace the old Nirvana units, this has been developed with the help of UCQ and tested and calibrated using our data from previous seasons records.

Currently NIR guns are leased from Central Queensland University for a period of 5 months at a cost of \$27,000. This is for 5 of the now unsupported Nirvana NIR Guns.

It is possible this price could increase as the University has purchased some of the new Felix 750 units. At this stage they cannot confirm the leasing cost of the new units.



Current Nirvana Unit

### **Proposed Situation**

We have met with the manufacturers of the new Felix unit and have been able to obtain an extremely good price to purchase 5 units directly from the manufacturer.

Purchasing 5 units will allow for each farm to have a unit onsite at all times that will be calibrated specifically to the individual farm. Rather than having to recalibrate the unit each year.

We will also have 2 extra units that we can maintain from Head office with Quality control using one unit to assist the smaller external growers, and the extra unit can be rented / leased to larger external growers that require the units for an extended period of time. Income from this is not included in the calculation.

Trials of unit were conducted in the NT during 13/14 season by UCQ. Calibration of the new unit against the old Nirvana unit to test and validate the data model used to operate the unit. UCQ is confident that the new units are now commercially ready for use.

The Felix Unit is a far more robust unit with a stainless steel case rather than plastic, it also has push button operation instead of touch screen which extends the battery life of the unit. The Nirvana unit has always required extra batteries to enable use for the full day. The Felix unit is also a lighter unit for ease of use.

The unit was tested by HFF in season 13/14 in field conditions and operated well with no fails

The units purchased from Felix Instruments have any required maintenance costs in the first 12 months covered free of charge. Any further maintenance plans which are required in subsequent years may be purchased from Felix Instruments.

The proposed vendor has confirmed that any software upgrades which are necessary come with no additional costs. The software updates will happen periodically as improvements, refinements or bugs are realized.

We are able to secure the discounted price of USD \$7,500 per unit by purchasing 5 units from the supplier. We are investigating the option of selling the 5<sup>th</sup> unit to Acacia Hills. The purchase of 4 units would be a unit price of USD\$9,500 and total cost of USD\$38,000.



New Felix 750 unit

#### **Alternatives Considered**

1. We considered a new machine from Korea.  
UCQ have purchased one of these units to test and calibrate and confirmed it will not work and cannot be modelled for mangoes.  
This unit has worked well with citrus fruit but does not have the capabilities to be converted to read the required colours for mangoes. It is also a thin plastic unit which would not withstand the continual use in the mango paddock



Korean Sunforest Unit

2. We have also trailed a DA Meter from Italy. The DA meter measures a decline in the skin's green background colour, correlated with ethylene production and increase in ripeness. The theory was tested and there was no clear correlation between the colour change and dry matter increase. It was particularly affected by fruit location on the tree and placement in the orchard.



3. Continue to lease existing current spec units. There is no support for these units and there is a risk of failure of units during the season.

### R&D

Will this project involve the development of a new product or process? No

What testing or trials will this project involve? Yes - Calibration

### Imports

Does the project include the importation of goods? Yes

### Checklist

Has a training plan been developed?	yes
Has the cost of training been included?	yes
Has the cost of delivery been included?	yes
Has the cost of installation & commissioning been included?	N/A
Does the equipment meet Australian standards? e.g. electrical; H&S	Yes
Have critical spares been included?	Yes
Has consideration been given to service departments? e.g. engineering maintenance plan; hygiene; data collection	Yes

### Financials and cost breakdown

Capital Expenditure - Financial Analysis And Approval								
Project Title	Purchaser NIR Guns							
Project Number	TBA							
	Yr0	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7
Additional Sales								
Margin								
Incremental Overheads		27,000	27,000	27,000	27,000	27,000		
Depreciation		(9,139)	(9,139)	(9,139)	(9,139)	(9,139)		
<b>Marginal EBIT</b>		<b>17,861</b>	<b>17,861</b>	<b>17,861</b>	<b>17,861</b>	<b>17,861</b>	-	-
Tax		(5,358)	(5,358)	(5,358)	(5,358)	(5,358)	-	-
<b>NOPAT before Interest</b>		<b>12,503</b>	<b>12,503</b>	<b>12,503</b>	<b>12,503</b>	<b>12,503</b>	-	-
NOPAT		12,503	12,503	12,503	12,503	12,503	-	-
Depreciation		9,139	9,139	9,139	9,139	9,139	-	-
<b>FCF</b>	<b>(45,693)</b>	<b>21,642</b>	<b>21,642</b>	<b>21,642</b>	<b>21,642</b>	<b>21,642</b>	-	-
Discount Rate		20%	20%	20%	20%	20%	20%	20%
<b>Present Value of Cash Flows</b>	<b>64,722</b>	<b>18,035</b>	<b>15,029</b>	<b>12,524</b>	<b>10,437</b>	<b>8,697</b>	<b>0</b>	<b>0</b>
Invested Capital	(45,693)	18,035	15,029	12,524	10,437	8,697	0	0
<b>NPV</b>	<b>19,029</b>		<b>IRR</b>	<b>37.85%</b>				

## Assets

Asset ID # (Obtained from BI)	Asset Description	Cost \$AU
HF000016	NIR Gun 1	9,138
HF000017	NIR Gun 2	9,138
HF000018	NIR Gun 3	9,138
HF000019	NIR Gun 4	9,138
HF000020	NIR Gun 5	9,138
Total Cost		45,693

## Quotes & Supplier Selection

### Attached Quote

Note: The quote provided is denominated in USD.

1554 NE 3rd Ave  
Camas, WA 98607  
(360)833-8835 Phone  
(360)833-1914 Fax  
sales@cid-inc.com  
**Quotation #:** 15.700.0603.D.1075

## Quotation

FedEx

### **Quotation For: Ship To:**

**Quote Date:** 6/3/2015

SHIP VIA TERMS VALID THROUGH

Wire Prepay 12/31/2015

**Kym Christiansen**

**One Harvest Fresh Fruits Pty Ltd**

63 Tile St

Walco, QLD 4076

kym.christiansen@oneharvest.com.au

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INCO TERMS

SPECIAL INSTRUCTIONS

### **Qty Item Description Information Cost Subtotal**

28% off. See discount.

5 F-750 Produce Quality Meter A portable NIR spectrometer that non-destructively measures dry matter (brix, total soluble solids, and chlorophyll content) to assess fruit maturity and skin color

\$9,850.00 \$49,250.00

0 W2-750 2 Year Warranty Covers 2 years of annual maintenance, parts and labor for instrument repair, and return shipping costs.

\$1,425.00 \$0.00

0 W3-750 3 Year Warranty Covers 3 years of annual maintenance, parts and labor for instrument repair, and return shipping costs.

\$2,850.00 \$0.00

0 W4-750 4 Year Warranty Covers 4 years of annual maintenance, parts and labor for instrument repair, and return shipping costs.

\$3,800.00 \$0.00

1 ExpHandling Export Handling Fee \$200.00 \$200.00

**Sub Total:** \$49,450.00

**Sales Tax:** \$0.00

**Discount:** \$13,790.00

**Shipping:** \$763.00

**Total:** \$36,423.00

Wire transfer in US Dollars

**SENDER RESPONSIBLE FOR WIRE FEES**

Beneficiary Bank: Homestreet Bank

1201 Third Ave, Suite 700

Seattle, WA 98101

Swift: HOMSUS6S

Account Number: 0002009751

Beneficiary Customer: CID Bio-Science Inc

Address 1554 NE 3rd Ave

Camas WA 98607

Receiving Bank Routing Number: 325084426

TAX ID: 82-0429393

ALL banking information must be listed on wire instructions

COUNTRY OF ORIGIN U.S.A

FED ID 82-0429393 DUNS 55-593-3084

MADE IN THE USA

**A 20% Restocking Fee will be  
charged for all returned items.**

CID EXPORTS THESE COMMODITIES,  
TECHNOLOGY, OR SOFTWARE FROM THE UNITED  
STATES IN ACCORDANCE WITH THE EXPORT  
ADMINISTRATION REGULATIONS. DIVERSION  
CONTRARY TO US LAW IS PROHIBITED.

**International orders are subject to export handling fees.**

Page 1 of 1 quote: 15.700.0603.D.1075 printed on: 6/15/2015