### INCOME:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Rate</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest*</td>
<td>2500 bags/ha</td>
<td>@ $ 12.50 /bag</td>
<td>$ 25,000.00</td>
</tr>
<tr>
<td>Graded &amp; Packed</td>
<td>2000 bags/ha</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### OPERATING COSTS:

#### Seed and Plants
- **Seed**
  - Quantity: 3.5 kg/ha
  - Rate: $ 400.00 /kg
  - Price: $ 1,400.00

#### Fertiliser
- **Starter (base fertiliser)**
  - Quantity: 400 kg/ha
  - Rate: $ 1.06 /kg
  - Price: $ 424.00
- **Urea (side dressing)**
  - Quantity: 300 kg/ha
  - Rate: $ 0.86 /kg
  - Price: $ 258.00
- **Micro Nutrients**
  - Quantity: 5 L /ha
  - Rate: $ 6.50 /L
  - Price: $ 32.50

#### Fuel
- **Ground/Bed Preparation**
  - Quantity: 2.7 hr/ha
  - Rate: $ 1.25 /L
  - Price: $ 50.63
- **Sowing/Planting**
  - Quantity: 2.2 hr/ha
  - Rate: $ 1.25 /L
  - Price: $ 41.25
- **Chemical Applications**
  - Quantity: 4.2 hr/ha
  - Rate: $ 1.25 /L
  - Price: $ 63.00
- **Fertiliser Applications**
  - Quantity: 1.0 hr/ha
  - Rate: $ 1.25 /L
  - Price: $ 15.00
- **Harvesting/Bin Pick Up**
  - Quantity: 5.0 hr/ha
  - Rate: $ 1.25 /L
  - Price: $ 75.00

#### Chemicals
- **Pre-emergent Herbicide**
  - Quantity: 2 applications
  - Rate: $ 10.10 /L
  - Price: $ 20.20
- **Post-emergent Herbicide**
  - Quantity: 2 applications
  - Rate: $ 63.31 /kg
  - Price: $ 333.24
- **Post-emergent Herbicide**
  - Quantity: 2 applications
  - Rate: $ 53.10 /L
  - Price: $ 297.36
- **Insecticide**
  - Quantity: 2 applications
  - Rate: $ 154.80 /L
  - Price: $ 277.50
- **Fungicide**
  - Quantity: 3 applications
  - Rate: $ 8.24 /kg
  - Price: $ 54.38
- **Fungicide**
  - Quantity: 1 application
  - Rate: $ 50.00 /kg
  - Price: $ 125.00
- **Fungicide**
  - Quantity: 1 application
  - Rate: $ 161.00 /L
  - Price: $ 161.00
- **Fungicide**
  - Quantity: 2 applications
  - Rate: $ 20.25 /L
  - Price: $ 93.15

#### Water
- **Furrow Irrigation**
  - Quantity: 5 ML/ha
  - Rate: $ 60.00 /ML
  - Price: $ 300.00

#### Labour
- **Tractor Driving**
  - Quantity: 1 person
  - Rate: $ 25.00 /hr
  - Price: $ 377.50
- **Field (weeding)**
  - Quantity: 1 person
  - Rate: $ 18.00 /hr
  - Price: $ 90.00
- **Irrigation**
  - Quantity: 1 person
  - Rate: $ 25.00 /hr
  - Price: $ 25.00
- **Harvest**
  - Quantity: 25 bins
  - Rate: $ 55.00 /bin
  - Price: $ 5,500.00
- **Pre Grade**
  - Quantity: 20 bins
  - Rate: $ 3.20 /bin
  - Price: $ 256.00
- **Packing (on-farm)**
  - Quantity: 400 bags/ha
  - Rate: $ 1.25 /bag
  - Price: $ 5,500.00

#### Electricity/Gas
- **Packing Shed**
  - Quantity: 32.0 hr/ha
  - Rate: $ 1.25 /hr
  - Price: $ 40.00
- **Curing Fans**
  - Quantity: 2000 bags/ha
  - Rate: $ 0.18 /bag
  - Price: $ 360.00

#### Packaging
- **Package Materials**
  - Quantity: 2000 bags
  - Rate: $ 0.40 /bag
  - Price: $ 800.00
- **Accessories (pallet wrap)**
  - Quantity: 5 rolls
  - Rate: $ 20.00 /roll
  - Price: $ 100.00

#### Freight/Transport
- **Truck**
  - Quantity: 48 bags/ pallet space
  - Rate: $ 115.00
  - Price: $ 4,800.00
- **Other Costs**
  - **Levies**
    - Quantity: 40 t/ha
    - Rate: $ 2.00 /tonne
    - Price: $ 80.00
  - **Commissions**
    - Quantity: 15%
    - Rate: $ 3,750.00
  - **Bin Hire**
    - Quantity: 110 bins/ha
    - Rate: $ 0.40 /bin/day
    - Price: $ 1,056.00

### B. Total Operating Costs $ 23,664.59

### Break-even Price $11.71 / bag for 2000 bags / ha

### Gross Margin per ha (A-B) $ 1,335.41

### Gross Margin /ML $ 267.08
ONIONS - Hand Harvest 2013

SENSITIVITY ANALYSIS

TABLE 1- Effect of Yield and Price on Gross Margin /ha

<table>
<thead>
<tr>
<th>YIELD (bags)</th>
<th>DELIVERED PRICE ($/bag)</th>
<th>10.50</th>
<th>11.50</th>
<th>12.50</th>
<th>13.50</th>
<th>14.50</th>
<th>15.50</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>-$2,953</td>
<td>-$1,678</td>
<td>-$403</td>
<td>$872</td>
<td>$2,147</td>
<td>$3,422</td>
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</tr>
<tr>
<td>1750</td>
<td>-$2,509</td>
<td>-$1,021</td>
<td>$466</td>
<td>$1,954</td>
<td>$3,441</td>
<td>$4,929</td>
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</tr>
<tr>
<td>2000</td>
<td>-$2,065</td>
<td>-$365</td>
<td>$1,335</td>
<td>$3,035</td>
<td>$4,735</td>
<td>$6,435</td>
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</tr>
<tr>
<td>2250</td>
<td>-$1,620</td>
<td>$292</td>
<td>$2,205</td>
<td>$4,117</td>
<td>$6,030</td>
<td>$7,942</td>
<td></td>
</tr>
<tr>
<td>2500</td>
<td>-$1,176</td>
<td>$949</td>
<td>$3,074</td>
<td>$5,199</td>
<td>$7,324</td>
<td>$9,449</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:

Authors - This budget was prepared by T.Napier, G.Kelly and S.Watts and outlines production for inland NSW.

Area - Riverina is the main growing region in NSW.

Production - Aim for 50 to 60 plants/m² on 1.5 to 1.8 m beds. Sowing commences in May with early varieties and continues to late July with late maturing varieties. Gladalan types and early hybrids should be sown from 1st to 15th May. Early and late 'Creamgold' should be sown after 15th May. Early sowings can cause crops to bolt.

- Onions undergoing long term storage should be graded to remove diseased and damaged bulbs.
- Weed control during establishment and the early growth stages is essential to produce adequate yields.
- Monitoring weather conditions and protective spray programs are critical to disease management.
- Water usage is 4 to 6 ML/ha and varies with soil, location and season.

Pests, Diseases & Disorders - Thrips are the main insect pest. Downy mildew is the main disease problem. Black mould (Aspergillus) and neck rot (Botrytis) can be problems in some seasons.

Harvesting - Avoid irrigating within 3 weeks of harvest. Commence harvest at 90% tops down.

- Harvesting usually commences in November and runs through to the end of February. The growing period depends on variety and time of sowing and ranges from 25 to 30 weeks.
- * 50 tonne (2500 bags) yield is required to grade and pack 40 tonne (2000 bags) of onions.

Curing - Onions have traditionally been cured in bins in open windy sheds.

- If black mould is a problem, forced air curing is recommended.

Packaging - Onions are normally marketed in 20 kg netted bags. Avoid long term storage of Gladalan types.

- 'Creamgold' for export should have good leaf coverage, at least 1 cm neck, uniform in colour, shape and firmness. Avoid delays in harvest which could result in sunburn. Coolstores at low humidity preferable for export onions.

Yields - Range from 35 to 50 tonne per hectare. Higher yields and quality obtained with hand harvesting.

Economic - This budget is ONLY A GUIDE and is specific to the regions specified. Costs and income can be altered for changes in crop management or input prices. Farmers should use their own figures.

- The budget uses a format similar to the Method 2 calculator in the VegTool Gross Margin program.
- Average prices for 2012 were used for this budget. Overhead costs or GST are not included.