The fast growing brown kelp species *Ecklonia maxima*, growing up to eight metres from base to the tip of the frond, is harvested by divers off the rugged coastline of southern Africa. This giant kelp species contains the unique active ingredients essential to Kelpak’s excellent performance on crops.

**THE PROCESS**

The harvested seaweed is sorted, cut and washed. The cleaned material is then inspected and progressively reduced. Due to the compressible nature of the *Ecklonia* particles, they can be subjected to extremely high pressures. The Cellburst Process induces a degree of potential energy into each particle. When passed at high velocity through to a low pressure zone, it effects the instant release of this energy, where the resulting expansion exceeds the elastic limit of the cell wall of the kelp, causing it to rupture and release its valuable contents. This unique Kelpak process is known as Cold Cellular Burst Technology, a proprietary method developed and refined over the last four decades.

**KELPAK BENEFITS**

- Prolific lateral rooting
- Increases growth of seedlings
- Increases growth of nursery plant-outs
- Improves nutrient uptake
- Increases photosynthesis
- Alleviates the effect of stresses
- Increases germination
- Increases fruit set and retention, size and colour
- Improves shelf-life during cold storage

**KELPAK APPLICATION**

- Seed coating
- Planter application
- Root dip
- Soil drench
- Drip irrigation
- Foliar spray conventional, electrostatic or aerial

Kelpak is a composite of natural actives including:

- Alginites
- Auxins
- Brassinosteroids
- Cytokinins
- Gibberelic acid
- Macro and micro nutrients
- Phlorotannins (Eckol)
- Polyamines

These compounds act individually or in concert, contributing to numerous favourable physiological responses

Visit our website for more information

**THE SOURCE**

The harvested seaweed is sorted, cut and washed. The cleaned material is then inspected and progressively reduced. Due to the compressible nature of the *Ecklonia* particles, they can be subjected to extremely high pressures. The Cellburst Process induces a degree of potential energy into each particle. When passed at high velocity through to a low pressure zone, it effects the instant release of this energy, where the resulting expansion exceeds the elastic limit of the cell wall of the kelp, causing it to rupture and release its valuable contents. This unique Kelpak process is known as Cold Cellular Burst Technology, a proprietary method developed and refined over the last four decades.

**A UNIQUE PRODUCT**

Kelp Products International’s mission is to provide cost effective benefits for our clients. Kelpak Liquid Seaweed Extract has been helping farmers improve their crop output for four decades. Global scientific trials prove that Kelpak’s unique activity delivers consistent and significant benefits to the farmer.
For Fruit Set:
3 Foliar applications in SPRING
at a rate of 300 ml/100 L starting at 20-30% bloom
with 5-10 day intervals
or
2 Foliar applications in AUTUMN
at a rate of 300 ml/100 L at 110 and 120 days
after harvest (in place of 3 bloom sprays)

For Fruit Retention and Fruit Size:
2 Foliar applications
starting at straw fruit colour with 7-10 day intervals

• Improves pollen germination
• Increases fruit set
• Increases fruit retention
• Increases fruit diameter and weight
• Improves marketable yield
• Maintains excellent fruit quality
• Reduces fruit split

Kelpak trial on cherry pollen growth

<table>
<thead>
<tr>
<th>TREATMENTS</th>
<th>POLLEN GERMINATION</th>
<th>POLLEN TUBE LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>µm</td>
</tr>
<tr>
<td>Control</td>
<td>47.0 ± 1.6 b</td>
<td>713 ± 2.2 b</td>
</tr>
<tr>
<td>Kelpak 0.1%*</td>
<td>64.0 ± 3.5 a</td>
<td>128.6 ± 9.2 a</td>
</tr>
<tr>
<td>P-value</td>
<td>≤ 0.001</td>
<td>≤ 0.001</td>
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</tbody>
</table>

*N.B. 0.1% dilution used on trial microscope slide – Kelpak’s recommended application is 0.3%

Effect of Kelpak on cherry yield

<table>
<thead>
<tr>
<th>LOCATION &amp; YEAR OF STUDY</th>
<th>APPLICATION RATE PER 100 L OF WATER</th>
<th>VARIETY</th>
<th>YIELD (ton/ha)</th>
<th>IASGP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CONTROL</td>
<td>KELPAK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>3-5 sprays at 300 ml/100 L</td>
<td>Bing</td>
<td>10.8</td>
<td>14.8</td>
</tr>
<tr>
<td>France</td>
<td>3 sprays at 300 ml/100 L</td>
<td>Lapins</td>
<td>6.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Chile</td>
<td>3-5 sprays at 300 ml/100 L</td>
<td>Bing</td>
<td>12.7</td>
<td>16.5</td>
</tr>
<tr>
<td>Chile</td>
<td>3 sprays at 300 ml/100 L</td>
<td>Lapins</td>
<td>26.4</td>
<td>28.3</td>
</tr>
</tbody>
</table>

IASGP = Increase above standard grower practice

Kelpak is scientifically proven to increase fruit set, fruit size, quality, and marketable yield in cherries.

RECOMMENDED RATE

For Fruit Set: 3 Foliar applications in SPRING at a rate of 300 ml/100 L starting at 20-30% bloom with 5-10 day intervals
or
2 Foliar applications in AUTUMN at a rate of 300 ml/100 L at 110 and 120 days after harvest (in place of 3 bloom sprays)

For Fruit Retention and Fruit Size: 2 Foliar applications starting at straw fruit colour with 7-10 day intervals

OPTIMAL APPLICATION

- Do not dilute more than 1:300 with foliar application
- Do not dilute more than 1:500 with drip application, apply as a pulse during last 10 minutes of irrigation cycle
- Maintain pH below 7
- Compatible with most agrochemicals