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 pollen germination and tube growth
- Increases fertilisation
- 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

ACTIVE COMPOUNDS
IN MICRO QUANTITIES:
- Alginates
- Brassinosteroids
- Gibberellic acid
- Macro and micro nutrients

IN SIGNIFICANT QUANTITIES:
- Phlorotannins (Eckol)
- Polyamines

WHY KELPAK
This natural seaweed concentrate utilises a unique process to deliver an end product that is scientifically proven to have numerous beneficial physiological effects on plants. Ongoing international research and trialling proves Kelpak’s ability to consistently increase the health, quality and yield in a wide variety of crops, with resultant profits benefiting farmers around the world for over forty years.

THE SOURCE
The giant brown kelp species *Ecklonia maxima*, is hand harvested by divers in the clean and nutrient rich waters off the rugged, cold Atlantic coastline of southern Africa. A strict harvesting protocol is followed to ensure uniformity and activity that is essential for the raw material used to manufacture Kelpak.

THE PROCESS
The freshly harvested seaweed is sorted, cut, washed, inspected and gradually reduced. The material is then subjected to high pressure, applying a significant degree of potential energy into each particle. When passed at high velocity through a low pressure zone, this stored energy instantaneously expands, causing the cell walls to rupture, releasing the active compounds found in Kelpak. This non-denaturing process avoids the use of heat, chemicals or freezing and is known as Cold Cellular Burst Technology, a proprietary method refined over the last four decades.

THE RESULT
Return on investment has proven to be consistently high in global trials. This natural seaweed concentrate offers numerous benefits, with resultant increased production profits for the end user.

Kelpak is approved for organic crop production according to regulations (EC) No. 834/2007 and 889/2008, and USDA/NOP-Final rule

Kelpak is manufactured using the unique cold cellular burst process

OPTIMAL USAGE
- Do not dilute more than 1:500 with foliar application
- Do not dilute more than 1:1000 with application through drip irrigation, apply as a pulse during last 10 minutes of irrigation cycle
- Do not apply more frequently than 10 days apart
- Maintain pH below 7
- Compatible with most agrochemicals

Active compounds act individually or in concert, contributing to numerous favourable physiological responses
GLOBAL TRIAL RESULTS:

### Table grapes
- Berry size: +10%
- Yield returns: +12%

### Wine grapes
- Yield increase: +15%
- Bunch stretching: +10%

### Melon
- Marketable fruit: +17%
- Fruit weight: +5%

### Watermelon
- Fruit weight: +31%

### Marketable yield

<table>
<thead>
<tr>
<th>Crop</th>
<th>Yield Increase</th>
</tr>
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<tbody>
<tr>
<td>Apples</td>
<td>+10%</td>
</tr>
<tr>
<td>Cherries</td>
<td>+18%</td>
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<tr>
<td>Pears</td>
<td>+11%</td>
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<tr>
<td>Peaches</td>
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<td>Plums</td>
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<td>Avocados</td>
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<tr>
<td>Citrus</td>
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</tr>
<tr>
<td>Blueberries/Raspberries</td>
<td>+8%</td>
</tr>
<tr>
<td>Strawberries</td>
<td>+14%</td>
</tr>
</tbody>
</table>

### Butternut
- Large fruit yield increase in return: +23%
- Pumpkin increase in return: +21%

### Cucumbers
- Plant root mass: +50%
- Fruit/tunnel: +11%
- Fruit mass: +12%
- Shelf-life (days): +6

### Potatoes
- Dry land yield: +16%
- Irrigated land yield: +11%
- Seed potato yield: +17%

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### Carrots
- Head weight: +11%

### Chicory
- Head weight: +15%

### Onions
- Head weight: +13%

### Head lettuce
- Head weight: +16%

### Leafy lettuce
- Leaf weight: +13%

### Broccoli
- Head weight: +15%

### Cauliflower
- Head weight: +13%

### Cabbage (large)
- Head weight: +15%

### Cabbage (small)
- Head weight: +9%

### Legumes (seed yield)
- Dry beans: +26%
- Green beans: +10%
- Peanuts: +16%
- Peas: +17%
- Soybeans: +17%

### Cereal crops
- Barley: +15%
- Canola: +12%
- Maize: +16%
- Rice: +13%
- Wheat: +12%

### Nut crops
- Almonds: +23%
- Macadamias: +17%
- Pecans: +16%
- Walnuts: +18%
**DIRECTIONS FOR USE**

**Suitable For Application With Electrostatic Spray Equipment**

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<tr>
<td>ALMONDS</td>
<td>3L/ha</td>
<td>Spray at 50% bloom and repeat twice at 10-14 day intervals.</td>
</tr>
<tr>
<td>AVOCADOS</td>
<td>3L/ha</td>
<td>Spray with gibberellic acid inhibitor at 50% bloom and repeat 14 days later.</td>
</tr>
<tr>
<td>BANANAS</td>
<td>2-4L/ha</td>
<td>Spray pre-bloom and repeat 2 to 3 times at monthly intervals.</td>
</tr>
<tr>
<td>BLUEBERRIES, POME &amp; STONE FRUIT</td>
<td>3L/ha</td>
<td>Spray at fruit set and repeat twice at 14 day intervals.</td>
</tr>
<tr>
<td>CHERRIES</td>
<td>3L/ha</td>
<td>Spray at 50% bloom and repeat twice at 10-14 day intervals. Optional sprays at straw and 14 days later.</td>
</tr>
<tr>
<td>CITRUS</td>
<td>200 ml/100 L water</td>
<td>Spray 3 times between white tip and full bloom. Optional spray at fruit set. Spray post-harvest with nitrogen applications.</td>
</tr>
<tr>
<td>MACADAMIAS</td>
<td>200 ml/100 L water</td>
<td>Spray start of bloom and repeat 4 times at monthly intervals.</td>
</tr>
<tr>
<td>NEW ORCHARD &amp; VINEYARD PLANTINGS</td>
<td>1L/100 L water</td>
<td>Dip bare roots of nursery trees before transplant or soak soil around trees after plant-out and Spray 3 to 5 times during early active growth at 21 day intervals.</td>
</tr>
<tr>
<td>PECANS &amp; WALNUTS</td>
<td>3L/ha</td>
<td>Spray at cackin elongation and repeat twice at 14 day intervals.</td>
</tr>
<tr>
<td>STRAWBERRIES</td>
<td>1L/100 L water</td>
<td>Drip the runners in solution at plant-out and Apply at 21 day intervals, cease application 1 month before end of harvest.</td>
</tr>
<tr>
<td>TABLE GRAPES: ALL CULTIVARS</td>
<td>2L/ha</td>
<td>Spray at 5-10 cm shoot growth. Spray in 1000 L water or less after set (4 mm berry size) Repeat 2 to 3 times at 10-14 day intervals or Spray as above with electrostatic applicators or Dip bunches 2 to 3 times at 4-12 mm berry size.</td>
</tr>
<tr>
<td></td>
<td>3L/ha</td>
<td>Spray at start of berry softening (veraison) and repeat 14 days later.</td>
</tr>
<tr>
<td></td>
<td>4.5 L/ha</td>
<td>Improved sugar and colour.</td>
</tr>
<tr>
<td></td>
<td>2-3L/100 L water</td>
<td>Spray 10 to 14 days later, but not later than tuber formation.</td>
</tr>
<tr>
<td></td>
<td>1L/100 L water</td>
<td>Spray between V3 (3-Trifoliolate) and R1 (start of flowering) growth stages.</td>
</tr>
<tr>
<td></td>
<td>3L/ha</td>
<td>Dip seed pieces for 15 minutes before planting and Spray at 4-5 leaf stage and repeat once or twice at 14-21 day intervals.</td>
</tr>
<tr>
<td>WINE GRAPE: Bunch stretching</td>
<td>2L/ha</td>
<td>Spray at 5-10 cm shoot growth. Spray 2 weeks before flowering and repeat at start of flowering to 30% bloom.</td>
</tr>
<tr>
<td></td>
<td>2L/ha</td>
<td>Spray at start of growing season and repeat 14 days later. Repeat sprays after summer heat stress.</td>
</tr>
<tr>
<td>TURF &amp; SPORTS FIELDS</td>
<td>2L/ha</td>
<td>Spray 21 days after second flower bed drench.</td>
</tr>
<tr>
<td>GREENS</td>
<td>100 ml/10 L water</td>
<td>Dip tray with seedlings in solution, or wet seedling tray/bag before transplant and Spray 14 days after emergence or transplant and repeat at 21 day intervals.</td>
</tr>
<tr>
<td>FLOWERS &amp; ORNAMENTALS</td>
<td>50 ml/10 L water</td>
<td>Dip tray with seedlings in solution, or wet seedling tray/bag before transplant and Spray 14 days after emergence or transplant and repeat at 21 day intervals.</td>
</tr>
</tbody>
</table>

**Orchard Application:** Volume determined according to tree-row-volume
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