

# FEATURED SOIL AMENDMENT: KARANJA CAKE

## Ideal for garden soils and potting mixes!

Organic Terviva Karanja Cake (*Pongamia pinnata*) is what remains after the seed kernels have been processed for oil.

Rich in minerals and organic nitrogen (4.5%), it is an effective plant based “green manure” or fertilizer. Its also has effective in reducing pests and diseases

### Benefits:

- Improves strength, flavor and quality of crops
- Contains phyto-chemicals which inhibit the growth of pathogenic soil microbes
- Encourages beneficial organisms – earthworms love it!
- Completely biodegradable and leaves no residues
- Approved organic by the Wa State Dept of Agriculture

### DIRECTIONS FOR USE:

#### *Gardens:*

Use as a top-dressing around plants or work into the soil at a rate of 25 lbs per 1,000 square feet.  
Water thoroughly after application.

#### *Containers:*

Add 1 cup per 5-gallons of soil or soilless media.

Soil Drench/ Foliar Spray:

Place 1 cup in a mesh bag and brew with 5 gallons of water for 1-2 days. If using an air pump, bubble for 36-48 hours prior to application.

#### *Grower's Tip:*

As a preventative measure, use during the whole lifecycle of your plants. Often combined with neem for dramatic results.

# FEATURED SOIL AMENDMENT: NEEM CAKE

## Ideal for potting mixes and garden soils!

Organic neem cake (*Azadirachta indica*) is what remains after the seeds have been processed for oil. A slow-release nitrogen source (5%), it can be used to build good soil structure and grow stronger, more resilient plants.

**OMRI Listed for use in organic production.**

### Benefits:

- Promotes a rich, dark green leaf color
- Protects plant roots and enhances growth
- Encourages beneficial organisms – earthworms love it!
- A favorite for vegan gardening!
- Will not burn plants

### DIRECTIONS FOR USE:

#### *Gardens:*

Apply 44 lbs per 1,000 square feet before planting or work into the soil around existing plants and water thoroughly.

#### *Containers:*

Add 1-2 Tbsp per gallon of soil and mix thoroughly or use 1/2 to 1 lb per cubic yard.

#### *Soil Drench/ Foliar Spray:*

Place 1 cup in a mesh bag and brew with 5 gallons of water for 1-2 days. If you have an air pump, bubble for 36-48 hours prior to application.

# FEATURED SOIL AMENDMENT: KELP MEAL

## What are the Nutrients in Kelp Meal?

Kelp meal is one of the most popular soil amendments around today because of its extraordinary concentration of nutrients and minerals. Its beneficial content is so varied that new discoveries about kelp are still being made. However, growers know the most important thing: it works!

At SoHum, we use only Norwegian Kelp (*Ascophyllum nodosum*) gathered from the north Atlantic ocean near Nova Scotia, Canada. Dried kelp has long been popular for crops that demand high levels of potassium to flourish. Although kelp is most commonly associated with potassium, it contains more than 70 other trace minerals, vitamins, amino acids, and plant hormones.

Because kelp comes from the sea – a natural mineral soup of common and rare nutrients – it is one of the only soil additives that includes mannitol. Mannitol is a natural sugar that helps break down micronutrients so plant cells can process and use them more easily. This same sugar is a food source for soil bacteria and fungi helping them proliferate and aid in nutrient cycling.

## How is Kelp Meal Used in SoHum Living Soils?

Blended in a carefully choreographed living soil mix, kelp has the potential to make other nutrient-rich additives even more effective. It does this by serving to reduce overall stress on crops throughout their lifecycle – including the growth, budding and flowering stages.

Alone, kelp has the power to achieve hardier plants that deliver higher yields. Together with the other soil amendments in each batch of SoHum Living Soil, it produces a synergistic effect that makes many of our other ingredients that much more powerful. For example, nutrients like iodine and selenium are not major nutrients but without them certain metabolic reactions would not occur and therefore the plant or microbe may not be able to produce a necessary metabolite for optimal health or growth.

Many crops benefit from the inclusion of B-vitamins in their feed, kelp is chalk full of vitamin B12. But, Kelp is most popular for the plant hormones that it possesses – gibberellins, auxins, and cytokinins.

Using kelp as a seed soak allows for the gibberellins to help with germination. Later as a young plant or clone, kelp can increase lateral root growth (auxins) and root mass (cytokinins). It's important to note that having adequate kelp will help promote lateral bud development after pruning or topping.

# FEATURED SOIL AMENDMENT: KELP MEAL

## ***Overall Soil Benefits of Kelp Meal:***

Kelp's remarkable nutrient density has caused it to be composted, dried and applied to all kinds of crops. Some of its most notable benefits are as follows:

### **Benefits for Indoor Plants**

Kelp boosts the efficiency of any soil or potting mix to get the most from a limited space;  
It is great for crops like lettuce and potatoes that demand very high levels of potassium;  
It is one of the most effective ways to increase the size and storage life of a harvest.

### **Benefits for Outdoor Gardens**

Kelp enhances root mass, making it ideal for plants with a lot of outdoor space to grow;  
It makes plants moderately more resistant to a wide range of diseases, pests, and weather;  
It is natural and all-organic, making it right for any chemical-free growing environment.

At SoHum Living Soils, we're dedicated to producing the most effective living soil by and for growers – letting crops grow as nature intended while using scientifically sound methods. To find out more, contact us today.