# Greetings from

# Navratan Agro Organic Pvt. Ltd.

**10th May 2018**
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# Welcome to Organic World

**Dr.P.K.Pant, Ph.D.**

Dr.P.K.Pant, Doctor of Philosophy, is the Founder and Chairman of Navratan Agro Organic Pvt. Ltd., a company committed for green farming through technological interventions, human resource development and by providing innovative solutions to emerging challenges, He has more than 30 years' of experience in Project Development, Management & Implementation, training and teaching, HRD , Public Relation, and Administration.

With rare combination of technical excellence, conscientious administration, dynamic management skills and academic depth, contributed to research, education and development, his contribution has lead to optimization of output, outcome and delivery.

Dr. Pant has earlier worked as the President at NOPL, Vice President, Sheel biotech Ltd. , Asst. Vice President at ITSL group.

# Introduction

## TOPIC: POTTING MIX

# Soil Health

## pH

pH stands for 'potential of Hydrogen'). **A soil pH number tells gardeners a range that helps them determine whether their soil is acidic, neutral or alkaline. Soils with a pH of 7 are neutral; below a pH of 7, acidic; and above a pH of 7, Sodic soil.**

# Soil Health

- pH is too high (alkaline/ Sodic)
  - Add sulfur to recommended amounts

  (Beans, peas, onions require high pH levels)

- pH is too low (Basic/ Acidic)
  - Add lime to recommended amounts

  (Carrot, Cauliflower, Corn, Cucumber, Dill, Garlic require low pH)

Generally, limestone is used to raise a pH level, and sulfur is used to lower it.

# Oc and Ec

**Soil Organic Matter (SOM)** is mainly composed of carbon, hydrogen and oxygen but also has small amounts of nutrients such as nitrogen, phosphorous, sulphur, potassium, calcium and magnesium contained within organic residues. Organic carbon contents help us to understand the availability of **SOM.**

**SOM** = total organic carbon (%) x 1.72

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**Ec** **The electrical conductivity of soils varies depending on the amount of moisture held by soil particles. Sands have a low conductivity, silts have a medium conductivity, and clays have a high conductivity**

**The EC of the soil has direct relationship with growth of different crops. If it is :**
**less than 1 dSm-1 Normal.**
**1-2 dSm-1: Critical for germination**
**2-3 dSm-1: Critical for salt sensitive crops.**
**Above 3.0: Injurious to most of crops.**

# Soil Health

## NPK

- Nitrogen (N) – nitrogen is largely responsible for the growth of leaves on the plant.
- Phosphorus (P) – Phosphorus is largely responsible for root growth and flower and fruit development.
- Potassium (K) – Potassium is a nutrient that helps the overall functions of the plant perform correctly.

# Soil Mix

- Potting soil, also known as potting mix or potting compost.
- It is a medium in which to grow plants, herbs and vegetables in a pot or other durable container.
- Some common ingredients used in potting soil are peat, composted leaf, sand, perlite and recycled mushroom compost.
- Some plants require potting soil that is specific for their environment.

For example:

- Adenium would grow better in potting soil containing extra peat moss, while a cactus requires sharp (i.e. plenty of) drainage, most commonly perlite or sand.
- Water-based plants thrive in a heavier topsoil mix.

# Benefits of Making Potting Soil

Few reasons you might want to consider doing this yourself:

1. Light and Fluffy

2. Longevity

3. Retain Water

4. Nutrients to Plants

# The Ingredients

Some Example of Ingredients

1. Coco Peat or Peat Moss
2. Perlite and Vermiculite
2. Compost
3. Vermi Compost
4. Leaf Mold
5. Garden Soil
6. Sand

# Types of Soil Mix Contd…..

I. Seedling Soil Mix
II. Soil-less Container Mix
III. Soil-based Container Mix
IV. Potted Perennial and Shrub Mix
V. Peat-Soil Combination Mix
VI. Peat-Soil Combination Mix
VII. Soilless Mix (adapted for organic growers)

# Types of Soil Mix

## Seedling Soil Mix

- 5 parts finely screened compost
- 4 parts garden soil
- 1-2 parts coarse sand
- 1-2 parts COCO peat moss
- 200 gram lime

# Types of Soil Mix Contd…..

## Soil-less Container Mix

- 4kg COCO peat moss
- ½ kg vermiculite
- ½ kg bone meal
- 100 gram limestone
- 1 kg fully decomposed cow dung

# Types of Soil Mix Contd…..

## Soil-based Container Mix

- 1 part screened compost
- 1 part garden soil
- 1 part coarse sand or a mix of vermiculite and perlite

# Types of Soil Mix Contd…..

## Potted Perennial and Shrub Mix

- 1 part compost
- 1 part coarse sand
- 1 part coco peat moss
- 1 part composted leaf mold / kitchen waste
- 100 gram lime

# Types of Soil Mix Contd…..

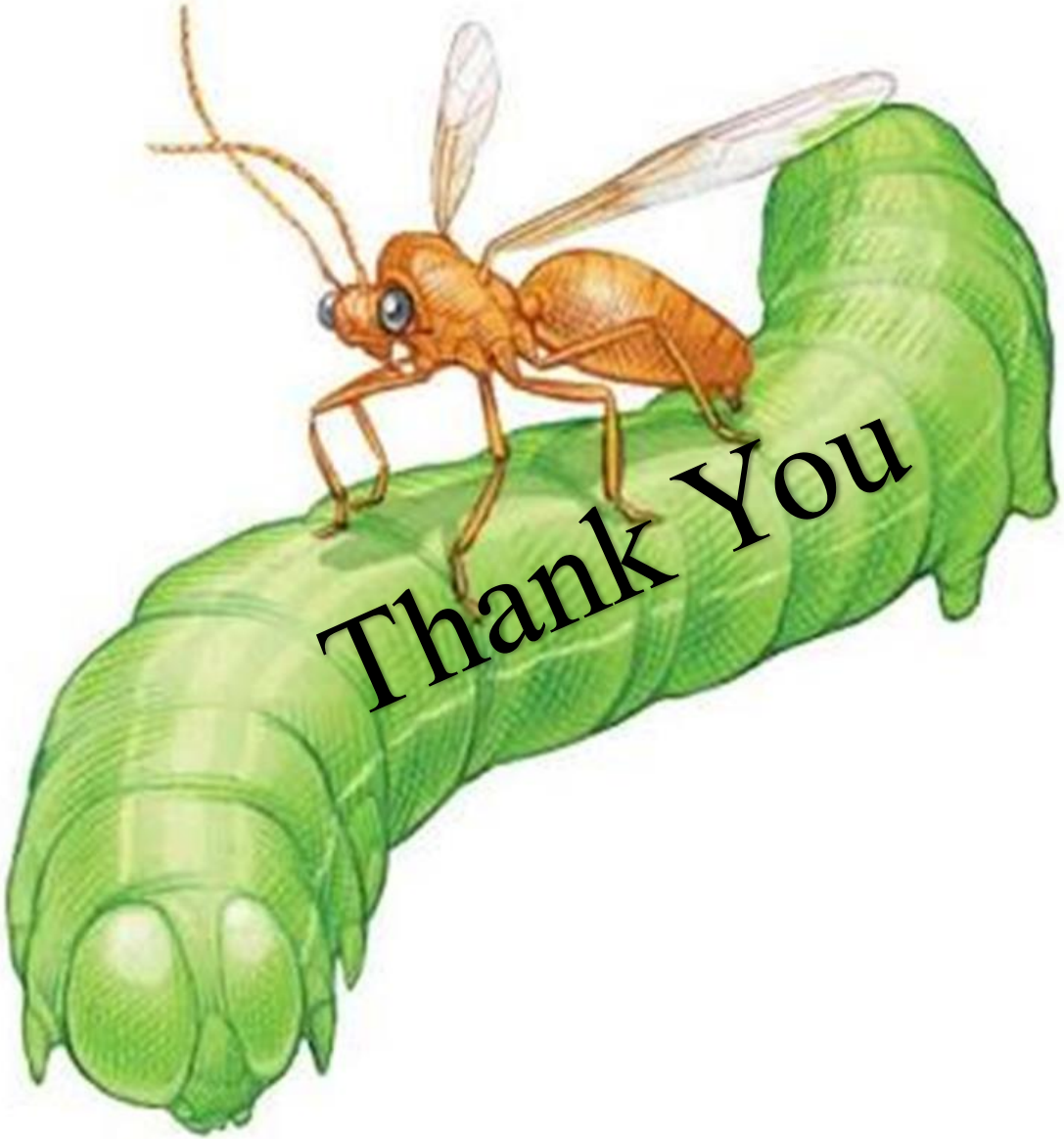
## Peat-Soil Combination Mix

- 2 parts vermiculite
- 3 parts coco peat
- 2 parts perlite
- 2 parts dehydrated manure
- 3 parts garden soil
- 1/2 part bone meal

# Types of Soil Mix Contd…..

**Soilless Mix (adapted for organic growers)**

- 3Kg coconut coir dust/ coco pit
- 1 Kg Red Sand
- 500 gram leaf mold
- 500 gram Compost powder
- 250 gram perlite
- 250 gram stone chips/ brick chips/ marble chips


Thank You