Specialized Substrates
For
Containerized Strawberry Production
Strawberry Growing Substrates

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There are many growing styles for tunnel or greenhouse grown strawberries.
Quite primitive, sometimes home-built, some are very modern, high tech. Many growers simply get the crop up onto gutters and keep it outside.
Whatever the growing system, the right substrate matters.
Propagation is an important part of all strawberry production. We’ll focus here on production.
Parameters Affecting a Substrate Recipe

- Irrigation system
- Growing system: Troughs/Pots/Bags
- Crop
- Crop duration
- Substrate handling
- Type of plant material
- Climate/season
- Experience and strategy of the grower
Just right

Too wet
Strawberry substrates are typically based on:
Peat
and/or
Coir
Perlite
Peat screened by chunk size

Peat Fractions

More Water

More Air

0

1

2
European Peat?

1. Fluffier
2. Longer fibers
3. More air
4. Better drainage
5. Water uptake capacity
6. Long life
7. Better control for the grower
Coir (Coco) Types

• Origin: Cocos nucifera (BVB)
• 3 product groups: coir/cocopeat – coco fibre – coco chips
• Cocopeat used to be a waste product of coco fibre production - today it is a valuable raw material for substrate production
Coir substrates

• made of the outer layer of the coconut

• the inner part of the coconut containing the cupra (the white part) is separated from the outer part

• BVB coir substrates are always made of coconuts of the same age and from the same plantations, ensuring uniformity

• The fibres are taken from the inner part of the shell, and stored for several months

• The soft material decays, leaving only tough and inflexible bark. After this process the shells are processed by machines into coir pith or cut and broken into coco chips (fine and medium)
For vegetable crops, most growers prefer to have a washed material to avoid surprises with high EC’s. The coir will be flushed to an EC level below 1,0 mS/cm. Washing removes only elements soluble in water.

Buffering removes elements naturally attached to the negatively charged complex (the chemical structure). The exchange complex is saturated with a calcium nitrate solution. The absorbed calcium displaces the residual potassium and sodium in the complex, which are washed away leaving a very clean coir.
Washed & Buffered for Strawberries

- Leaves a coir substrate perfectly suitable for soft fruit cultivation
- Process supervised and checked by BVB’s R & D center
- Meets RHP requirements
- Strawberries are very sensitive to high salinity and calcium deficiency
• Coir products improve the water uptake speed of substrates
• Coco fibre and coco chips increase the AFP of a substrate.
• Coir products have a natural pH between 5.5 – 6.5. The pH is not buffered
• Very important to monitor pH during cultivation
Perlite

- Expanded volcanic rock
- Very high porosity
- Very light weight
- Contains a lot of air
- Increases the AFP (Air-Filled Porosity) of a substrate
- Attracts water very fast and makes a substrate more ‘hydrophilic’
Which parameters influence substrate recipe?

- Irrigation system
- Growing system
  - Troughs/Pots/Bags
- Crop
- Crop duration
- Substrate handling
- Type of Plant material
- Climate/season
- Experience and strategy of the grower
Substrate Compaction
Measured compaction

2 strawberry propagators with the same tray substrate!

Average
Substrate Compaction

160 gr/lt
130 gr/lt
# Substrate Specifications

<table>
<thead>
<tr>
<th>Physical</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air / Water</td>
<td>EC</td>
</tr>
<tr>
<td>Stability</td>
<td>pH</td>
</tr>
<tr>
<td>WOK (Water Uptake Characteristics)</td>
<td>Nutrients</td>
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</tbody>
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The substrate producer must develop recipes which make it possible to achieve the specifications and desired crop performance.
Each grower has his/her own growing style and method.
The grower determines the mix recipe.
Substrate Formats

- Ready to use Grow Bags
- Compressed Coir Slabs
- 70 L Bags
- 6m³ Big Bales
• **BC1** - Very coarse strawberry substrates, hardest selected white peat, high afp (air-filled porosity), even after several years of usage.

• **BC2** - Superb quality, coarse strawberry substrates for long lasting production, based hard white peat. High afp even after long wet winters. Choose the very coarse, coarse or medium C2 mix.

• **BC3** - Standard strawberry substrate for day neutrals, single and double cropping. Blend of BVB’s graded white peat with other sources of white peat.

• **BC5** - Coir based strawberry substrates. Ideal where the substrate is going to be reused. Fine structure is suitable where mechanical filling is used. Initial growth in these substrates is extremely good thanks to perfect root-substrate contact. Very high afp figure. Coir guarantees a durable long lasting high quality substrate.
THANK YOU!

For More Information:

www.amaplas.com

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