



What is FytoCELL?

Introduction

FytoCELL is a ridged foam developed from the family of aminoplastics. This foam is a fully inert sterile substrate used extensively for horticulture, yielding excellent results.

FytoCELL is a suitable growing medium used for:

- **Horticulture**
 - Flowers
 - Young plants
 - Different types of vegetables eg. peppers tomatoes, cucumbers
 - Seedlings (bedding plants)
 - Nurseries
 - **Agriculture**
 - Vegetable seedlings
 - Fruit cultivar
 - Different types of vegetables eg. peppers tomatoes, cucumbers
 - **Forestry**
 - Forestry seedlings
 - cuttings
 - **Turf**
 - Golf courses
 - Sports fields
 - Municipalities
 - **Landscaping**
 - Roof gardens
 - Land reclamation.
-

What Fytozell offers

Fytozell offers the horticulturist the following advantages.

- Generative crop.
 - Dry cultivation, which results in fewer problems during the winter months in terms of flooding and lack of oxygen.
 - Greater root volume and greater water buffer available during the summer months.
 - Higher crop results both in terms of quality and quantity, fewer root problems during the winter and greater bearing power during the summer.
 - Less waste and lower waste disposal costs.
 - Self contained no need for planting pots.
 - Easy handling due to block formation and lightweight.
 - Highly suitable for drip feeding
 - Due to more frequent water supply there is a better regulation of nutrition with fewer fluctuations.
 - Competitive price.
-

**Air/water
comparison to
other substrates**

The physical characteristics of substrates are expressed in terms of air and moisture content at a standard suction force. The most frequently used suction force for substrate is -10cm.

An experiment was done exposing a number of well-known substrates that are used in horticulture to a suction force of -10cm. The table below demonstrates the volume fraction of air and water for these substrates.

Substrate	Volume of air	Volume of water
Poly-urethane flakes	93	05
Poly-urethane mat	77	18
Perlite (1-7.5mm)	71	25
Clay granules (4-8mm)	70	12
Clay granules (8-16mm)	70	12
Perlite (0.6-2.5mm)	61	35
Crushed clay granules	60	23
Clay granules (2-4mm)	55	21
Pumice stone (2-4mm)	51	32
Pumice stone (1-10mm)	40	45
Fytozell(RG14)	47	52
Irish peat (4-8mm)	37	54
Stone wool (annual)	25	66
Glass wool	25	74
Coir	25	70
Perlite (0-1mm)	27	70
Garden peat	09	81

The analysis

The analysis of Fytozell indicates that the water content is sometimes lower than that for other more common substrates. Given the low affinity of foam for water, the amount of **directly available** water to the plants is however much greater in Fytozell, as no water is absorbed by the substrate itself.

Root systems developed on Fytozell

Fytozell contains a high air content (30% at -10cm suction force) which results in strong root development and large bearing power for growth above ground. The oxygen supply to the roots can be realised by diffusion due to oxygen content in the slab. In wetter substrates less diffusion takes place resulting in low yields.

Advantages of a better root system

The most important advantage of a better, more extensively branched root system in this context for a horticulturist are:

- Better opportunities for cooling the plant
 - Improved absorption of nutrients that are absorbed passively and actively. Calcium is one of the elements that is absorbed passively
 - Making sure that the cell remains under tension s that growth, even at the warmest times of the day can continue. In the event of sufficient evaporation and water supply, the stomata remain open which means that the absorption of CO₂ and therefore photosynthesis can continue.
-

Magnified Cell Structure of Pytozell

