



## Peat substitute TEFA

Data sheet from September 2015

TEFA is a peat substitute produced from maize straw, a residue from grain maize production and 100% renewable. TEFA has been tested alone and in substrate blends, for production of young plants and for growing vegetables as well as herbs and ornamental plants. In Switzerland, it is certified for organic production. TEFA can entirely or partially replace peat in various applications.



Meadow flowers sown on 100% TEFA



Swiss chards sown on 100% TEFA (left) and on a peat substitute based on wood fibres (right)

**Physical properties:** TEFA is of fibrous structure with mostly 2-10mm fibre length.

Material	Density g/l	Dry matter %	Total pore volume at fc, %	Water content at fc, %	Air pore volume at fc, %
TEFA	ca. 200	ca. 50	92	54	38

fc = field capacity

The favourable structure of TEFA results in a very high total pore volume (92%). This makes TEFA particularly suitable for blends with heavy substrates (e.g. compost, top soil).

**Hygiene:** TEFA does not contain weed seeds, insects or other bugs.

**Salt content / electric conductivity:** 0.8 mS/cm (ideal)

**pH-value:** 6.5 – 7.5 (ideal)

**C/N-ratio:** 60-70 (high)

**Nutrient content:** Available nitrogen (NH<sub>4</sub> and NO<sub>3</sub>) low to very low, phosphorous (P<sub>2</sub>O<sub>5</sub>) low, sodium (K<sub>2</sub>O) high, magnesium (Mg) and calcium (Ca) medium

- ✓ TEFA is fermented and proofed biologically stable during 1 year of open storage.
- ✓ Today, TEFA is mostly blended into commercial substrates at limited blending ratio.
- ✓ Growth trials have been conducted with seeds (Swiss chards, lawn, meadow flowers, basil, sun flowers, others) and young plants (tomatoes, salad, strawberries). Nutrients were added in the form of di-ammonia-phosphate DAP and/or a balanced nutrient solution. Some plants (e.g. Swiss chards) performed better on 100% TEFA, compared to peat, compost and a wood-fibre-based peat substitute. Yield trials under professional growth conditions have not been conducted yet.
- ✓ TEFA rapidly takes on the pH of the irrigation water. It does not generate growth of fungus gnats, visible mycelium, or algae.

#### **Recommended applications of TEFA:**

1. Hobby gardening and landscaping: Supply to specialized substrate or compost producers, for preparation of blends with compost, top soil, peat or other components, in particular for total or partial substitution of peat, in ratios up to 50% by volume.
2. For professionals with their own preparation of blends (e.g. nurseries) or with automated nutrient supply (e.g. soil-less production in glass houses), in particular for organic production schemes.

**TEFA – premium quality – 100% renewable  
preserves natural resources – CO<sub>2</sub>-neutral**