

The Microbial Marketplace

In the “sugar economy”, plants act like banks, they borrow and lend. But no bank makes money without activity by others. In the microbial marketplace below ground, where sugar is traded for nutrients, photosynthetic bacteria are key players.

These microbes capture sunlight and make special energy transport compounds, and sugar on which other microbes and plants ultimately depend.

Plants depend on these organisms to supply the nutrient system with sufficient energy so that all the other functions – including the manufacture of sugar – can continue.

These microbes catch sunlight, catch carbon and make sugar. They also share captured energy in the form of special energy transport proteins, and by sharing sugars. Plants benefit enormously when the soil is full of a rich mix of bacteria doing these energy- harvesting and sugar manufacturing jobs.

If we want to grow more sugar above ground, it pays to give so though to the trader’s who help me, circulate and set a background “price” for the sugar all around the plant.

Bacterial photosynthesis and the sugar economy underground are what feeds, tends and helps energies plants. It might be time to think of this army of little guys when we think of how to build sugar in the crop.