

Bio-Accelerated Phosphorus

Many Australian soils have a bad habit of holding on to phosphorus. For farmers, this can be money locked in the soil.

Where plants are unable to use phosphorus once it is bound to the soil particles, there are special photosynthetic and other microbes whose job it is to release phosphorus and make it available in a soluble form.

In a healthy soil environment, these microbes outsource the manufacture of energised phosphorus compounds for plants. There is a fascinating community effort which goes on below ground in healthy soil which keeps phosphorus in play in a pool which plants and other microbes can draw on.

Depending on how the soil looks after, the community of organisms which keep phosphorus available either increases or diminishes. In most farmed soil, these organisms now are much lower in population than they once were.

Keeping soil biology healthy is an integral part of making phosphorus or enough energy on their own. They need the community effort below the soil to manage both the supply of phosphorus needed to make sugar, and the supply of the energy transport compounds (which contain phosphorus) needed to convert light energy into sugar.

Soil communities including photosynthetic bacteria recycle phosphorus continually. When they are, we need to add less phosphorus: when they aren't working, everything stops.

Ken Bellamy is the director of Townsville-based biotech company Vital Resource Management (VRM), Please e-mail questions to: enquiries@vrm.com.au