

EFFECTIVE SUBSOIL UTILISATION

This Insight shows the restrictions caused by hard pan in soils and provides an answer using tilling methods plus **BSN Superstrike** and **Foliar spraying** to enhance soil profile.

By Grant Borgward, Western Australia



As you can clearly see by the photo, the first significant hard pan that is restricting root growth is at the first pen or at 7 – 8cm depth.

The second hardpan is at 14 – 15cm, and as we go deeper and deeper into the soil profile the root population is less and less.

The plant is limited to accessing most of its nutrients from the top 7cm, and gets plenty of water while the soil is wet – but as soon as the surface dries out, so does the plant. The photo represents about 20cm of soil depth. The top 7cm has good soil structure and root growth, while the next 7cm has quite a poor soil structure that is tight and lacks oxygen and pore space, and therefore root growth. Once we get down to the bottom 7cm, the soil structure improves slightly and shows that this soil has the potential to have a total soil depth of about 30cm, which should be the goal of every farmer.

Take home message here is till your soils deeper every year with a longer knife point or deep tillage machine (Agrow Plow, Ausplow, Yoemans, Gesner).

Use **BSN Superstrike** to promote more root growth in the soil profile, and **Foliar Spray** with a **CSF** or **Plasma** to further enhance growth and increase nutrient and water uptake from your subsoil.