

# The real benefit of Pasture Cropping?

What is the real benefit of Pasture Cropping? I guess that depends on who you ask. An obvious answer would be the dual use of land for summer grazing and winter cropping. However, let's take a step back and look at things from another perspective.

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**P**rofitability would have to be one of the most common concerns across WA cropping lands right now. Leading directly into concerns about lack of regular rainfall, soil moisture loss, erosion, cost of... well everything! The result? A lack of predictable returns.

To me, Pasture Cropping holds the allure of improving soil structure, chemistry and biology, which are the three pillars of good productive fertile soil.

Of course it's the old 'chicken and the egg' scenario. If you want to improve something, then you have to find where it is weakest and make your first changes there.

So, let's say we would like to have a growing environment that could better capture and store moisture; suffer less crop potential loss between sporadic rainfall events.

## Step one — Create a chemically balanced environment

This is as relevant to conventional producers as it is to biological or even organic producers. We know that balancing soil pH yields better phosphorus availability, well let's take that a step further.

We have all mixed the wrong things together in a bucket (or worse a spray rig) and made an exciting new brick. That's what happens in the soil too, also known as a chemical hardpan.

If we start to balance soil chemistry the opposite happens, resulting in better root structure, more friable soil structure and increased fertiliser availability (even in sand).

## Step two — Improving soil structure

Oops, we already covered improving soil structure in step one! You see, improving soil structure doesn't need to be that hard. It's sometimes as simple as adding gypsum to a hard clay, or potassium to a crop grown in semi-sodic conditions. I over simplify; the trick is a good comprehensive soil test (i.e. looking at cations: Ca, Mg, K, Na, Al, H etc) which takes a lot of the guess work away.

## Step three — Stimulating biology

I get asked frequently, "how do you add biology to the soil?" The answer? Grow a better plant (i.e. Step One + Step Two = Step Three).

Of course, we have all sorts of useful specific biology, such as rhizobia and trichoderma. However, generally speaking, if you create an environment for beneficial biology, it will respond. The number one habitat for biology is plant roots.

## The fit for Pasture Cropping

I find the most frustrating aspect of broad acre cropping is our need to destroy summer vegetation to conserve moisture. The result is hot, hard, dry, dead top soil. Pasture Cropping has the potential to change this. Also, why lament poor soil carbon levels? Carbon appears to accumulate as a result of the collaboration between plant roots and biology resulting in polymerised sugars known as humates.

An opportunity exists to use Pasture Cropping, not only to improve soil structure, water infiltration, soil temperature, to name a few, but also to increase carbon. This could potentially result in additional moisture retention, fertiliser retention and possibly even disease suppression through increased competition.

Food for thought. ✓

