



What is the benefit of Cropping?



Profitability 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 return.

To me 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.



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Comparison Conventional Vs Biological

Step one - Create a chemically balanced environment

This is as relevant to conventional growers 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. Well that's what happens in the soil too, also known as a chemical hardpan. Well 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 that 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 (ie. looking at Cations Ca, Mg, K, Na, Al, H etc) this takes a lot of the guess work away.

Step three - Stimulating biology

I get asked frequently how do you add biology to the soil? Well simply put, grow a better plant. Ie Steps one + two = three.

Of course we have all sorts of useful specific biology such as Rhizobia, Trichoderma etc. however generally speaking If you create an environment for beneficial biology, it will respond; the number one habitat being plant roots.

Now for the tricky part...

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. Maintaining some kind of ground cover 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.

Perhaps an opportunity exists to use increasingly common summer rain fall to maintain some kind of perennial cover not only as additional stock feed, but also to improve soil structure, water infiltration, soil temperature etc, and to increase carbon potentially resulting in additional moisture retention, fertiliser retention and possibly even disease suppression through increased competition...

Food for thought.

Article kindly supplied by Dan Sutton, Eco-Growth.

