

FALLOW MANAGEMENT



Driving through Queensland sugarcane country you could be forgiven for not recognising what's growing on many of the blocks. Fallow crops including; soy-beans, sunflowers, cow peas, peanuts, rice and corn are all being planted. Small crops such as sweet potatoes, tomatoes and pumpkins are also becoming an important part of the cane-growing cycle.

*By Kate Gowdie
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At the recent Productivity Services Conference, held in the Wet Tropics in November, fallow cropping and species selection were high on the agenda.

Conference delegates were keen to learn about the array of species available and their suitability to different environments and growing conditions.

Chia seeds, sun hemp and forage cereals were just some of the species highlighted.

Of course, fallow cropping is not new. For some growers, fallow cropping has been part of their operation for as long as they have grown cane.

However, the presence of fallow cropping has waxed and waned over time.

It's popularity has been influenced by a range of factors including sugar prices, assignment restrictions, grain prices and access to markets.

Using fallow as part of an overall management strategy is one of the industry standards for Smartcane BMP.

Research has shown significant increases in yield where the cane-growing cycle is broken between the harvest of the final ratoon and the planting of the next cane crop, compared with the traditional plough-out, re-plant approach.

Breaking the monoculture of repetitive cane cycles can reduce pest, disease and weed burdens, and increase over-all soil health.

As with most farming, there is no one-size-fits-all regime when it comes to how and what you grow in your fallow.

Extended fallows of greater than six months, mixed crop fallows comprising different species and consecutive fallows of two or more crops between cane cycles are some of the practices being employed by growers.

Fallow cropping can have both agronomic and economic benefits when well managed.

If you are considering fallow cropping as part of your overall management strategy and would like further information, please contact your local Smartcane BMP facilitator and/or productivity services officer. ►



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Pictured: Smartcane BMP facilitator Christine Peterson discusses fallow cropping with Proserpine grower Andrew Holmes; (above) A trial fallow rice crop at the DAF's Walkamin Research Station; and a small selection of the wide range of legume and other seeds available for fallow cropping from NQ Tropical Seeds.

To gain the benefits from a fallow crop for successive cane crops, there are several factors to take into consideration:

- Nitrogen fixing crops – not all legumes are equal. Species, variety and growing conditions will result in varied levels of nitrogen fixing, organic carbon and fallow crop survivability.
- Harvesting versus use as green manure – nutrients extracted in a harvested product will not be returned to the soil. Using fallow crops as green manure allows all plant nutrients to be incorporated back into the soil.
- Water requirements – Where soil moisture and/or irrigation water is limited, allocating this resource to fallow cropping may not be an option.
- Amount of tillage required – crops requiring extensive and/or regular tillage may result in adverse outcomes to soil health.
- Length of fallow/fallow crop cycle – the length of the fallow will partly depend on the crop(s) you chose to plant. Consider the total fallow length required when selecting crops.
- Fallow crop equipment requirements – planting, harvesting, storing and transporting alternate crops to cane may require additional or modified equipment.
- New pests and disease – if your fallow crop is the only one of its kind in the area, it may inadvertently become a beacon for pests that may not have otherwise been present. Growing fallow crops may require a refinement of your pest and disease strategy. ■