

How effective is your fallow?

*A successful crop cycle starts with the fallow. A well-managed fallow is one of the keys to a profitable crop cycle. In this article, SRA Adoption Officer **Gavin Rodman, Tully**, looks at the key aspects of a fallow which will help make your next fallow an effective one.*

The fallow period provides an opportunity to do jobs that aren't possible during the crop cycle such as realigning blocks and drainage works. The fallow period is also an opportunity to break the sugarcane monoculture.

Many growers believe that they already fallow optimally, though in reality, many current fallows are of very limited value – too short, too weedy, or too many volunteers.

How long should my fallow be?

Your fallow should be long enough to allow any planned earthworks, to assist in your weed management and timing of operations, and also to kill the previous crop.

The length of the fallow, or having a fallow to begin with, will allow for less restrictions on when you may be able to plant the next crop. The length of your fallow should also be based on a carefully considered range of planting dates as soil temperature and soil 'wetness' are important factors in plant germination and a good establishment of the plant crop. Autumn planting is desirable in some areas, while late winter or spring planting is best suited to others.

If you are planning on growing a legume cover crop, your fallow should be long enough to allow planting any time after late October and a minimum of three months growth of the legume. This period of three months over the summer will allow for adequate vegetative bulk and nitrogen accumulation.

Fallowing with a legume cover crop is an excellent and sustainable method of enhancing soil health and structure, adding nitrogen and managing weeds.

Is my fallow too weedy?

So what are the issues associated with allowing weeds to grow in your fallow? Letting weeds take over your fallow might not cost you today, but it will cost you extra in the long run as the seed bank for these weeds build up in the soil and continue to germinate and grow throughout the crop cycle.

Allowing weeds to grow and seed in your fallow will lead to years of intensive management, as the old saying goes: "One year's seeding, many years weeding".

Weeds can also serve as a host for some sugarcane pests, allowing them to survive between crops.

Nematodes are a major pest of sugarcane with yield losses believed to be as high as 10 percent in plant and 7 percent in ratoons across all sugarcane soils in Australia. Management of nematodes involves including a legume rotation and ensuring that the fallow is kept free of weeds, particularly volunteer cane from the previous cycle.

What are the impacts of volunteer cane?

A good or effective fallow does not involve the presence of volunteer cane. Volunteer cane is cane that has ratooned after being sprayed out or tilled. Ensuring that your fallow is free from volunteers is the only way to break the issues associated with a monoculture.

Lifecycles of pests can be broken by well-managed fallows and, in turn, reducing pest numbers. Cane volunteers can attract egg-laying cane beetles and maintain soldier fly numbers, as these volunteers are an attractive food source for their young. Volunteer cane can also provide a food source for soil-borne diseases such as pineapple disease, fusarium sett rot and even serve as a host for ratoon stunting disease.

Ensuring your fallow is free of volunteers will give your plants the best chance for a healthy and disease free establishment.

